The Harveian Lectures

ON

TWENTY-FIVE YEARS' EXPERIENCE OF URINARY SURGERY IN ENGLAND.

Delivered before the Harveian Society of London

BY G. BUCKSTON BROWNE.

LECTURE I.[1]

Delivered on Nov. 7th, 1901.

MR. PRESIDENT AND GENTLEMEN,—In thanking the Harveian Society for the honour which it has conferred upon me in inviting me to deliver the Harveian Lectures I should like to remark upon the unusual nature of the society's choice. The Harveian Society has invited a purely private practitioner to lecture before it. My life since I left University College Hospital and School in December, 1874, where I was first of all house surgeon and then demonstrator of anatomy, has been entirely devoted to private practice. At the end of the year 1874 I was invited by Sir Henry Thompson to join him as his assistant and for the next 14 years we were side by side. He never operated without my being present and I practically saw all his patients with him. These 14 years were very active and full of experience and opportunity. When they came to an end I worked on alone, not less actively, so that I have had 27 years in one great department of surgery—namely, the surgical diseases of the urinary organs, and I propose to devote this present course of lectures to what I think I have learned in these years and to attempt to give my reasons for the faith which I believe is in me. Just as in ovariotomy and in all abdominal surgery peritonitis was in the early days the great dread of the surgeon, so in urinary surgery fever was the great fear of the operator. And this fear controlled, influenced, and in fact dominated all his movements and all his plans and checked all his enterprise. If he passed a lithotrite or employed a catheter he often found that fever followed, and a fever which not infrequently proved fatal. The surgeon therefore interfered as little as possible with the urinary passages and for many years but little real progress was made.

I propose at once to consider the question of urinary fever, for it is at the bottom of the whole of urinary surgery. Wherever you touch urinary surgery you find this fever, and even now its causation and therefore its prevention is very little understood. In all our books you find vague and uncertain statements. I believe this fever to be at its outset purely a suppression of urine, varying from merely transitory to the most complete and absolute, this suppression being due to the inhibition of the action of the kidney from urethral shock. The nerve-supply of the urethra is remarkably generous and the penis itself is most intimately connected in this way with the rest of the body. An excellent illustration of the very liberal nerve-supply of the urethra and of its intimate connexion with the rest of the body is afforded by the study of the marvellous phenomena of erection. In the pre-chloroform days many a man has died upon the operating-table simply from the shock of an amputation of the penis. If a bougie is passed upon the average young man in the standing posture he will in many cases in a few moments be writhing on the floor in what is practically an epileptiform convulsion; let him be put to bed, and a good perspiration encouraged, and he will soon be well; but if an old man be subjected to a similar shock he does not always recover. Many surgeons of sufficient experience will be able to recall some case of an elderly man who has had a catheter passed and who has never secreted another drop of urine and has died. In illustration of the effects of shock and of its control by the use of sedatives I well remember a nervous, sensitive, highly-strung young practitioner who came to me with a severe urethral stricture. The gentlest instrumentation was followed by high fever. I fortunately thought of giving him one-sixth of a grain of morphia hypodermically an hour before passing the bougie. This was followed by the happiest results: there was no fever and dilatation was easily proceeded with. Some years ago I had even a more instructive case than this with my old fellow-student Dr. Peter Duncan of Croydon. He called me to a case of an elderly gentleman with retention of urine and a long history of urethral stricture. The case was urgent and with great care and not easily I passed a No. 1 silver catheter and drew off a large quantity of urine. Next day I found the patient comatose and so ill from urinary fever that both Dr. Duncan and I thought he would die. He responded, however, to active treatment and made a good recovery. The question then was, what was to be done to the stricture? It must be treated, but if the simple passage of a No. 1 silver catheter was nearly followed by death, what would happen if the interference was more radical than that? Sir William Broadbent supported me in my proposal to perform my operation of internal urethrotomy at one sitting under an anæsthetic. A clean cut through the fibres of the stricture was followed by the best results. There was no fever, no illness of any kind, and the patient lived for several years in perfect urethral comfort. We often find in practice that the stricture patient can bear a certain sized bougie well, but if an instrument at all larger is used its introduction is sure to be followed by fever. I have often found that a medical friend is very much surprised when it is pointed out to him that however often he has had to deal with urinary fever in male adults he has never had to do with it in women or in children of either sex, for women and children never suffer from this fever. Now do not all these facts prove that the fever is due to nervous shock, to urethral shock? The male adult's urethra is a sexual as well as a urinary tract, his penis is highly endowed with nerves, and it is precisely he who suffers from this fever. The urethra of the woman and child is a urinary tract only and they do not suffer. Deal gently with the male urethra and all will probably be well; use violence and the results may be disastrous. Narcotise the patient with opium or with chloroform and you may use violence up to a certain point and still have no fever. You may often cut the urethra, if you do not stretch it, and have no fever. You may one day pass a catheter and have no fever, and next time and on the same patient you may not be so skilful and successful, you may blunder and hurt the patient and make him bleed, and severe fever will follow. Then, again, it is impossible to practise for many years among patients troubled with urinary disorders without observing that certain nationalities are more prone to this fever than others. The French are certainly much more susceptible than the Germans, and among the British the Irishman is far more likely to suffer than the Englishman. These more susceptible people are certainly the most nervous, this term being used in its highest and best sense, for many will agree that the Irish and the French are the two cleverest peoples in the world. Even amongst people of the same nation, the more highly trained, the more educated, the more refined the subject, the more likely is he upon due provocation to suffer from this fever. The physician, the poet, and the painter are certainly worse subjects for operation where the urethra is concerned than the labourer and the uneducated classes generally. All these clinical facts prove that the onset of urinary fever is due to nervous urethral shock conveyed to the secreting tissues of the kidneys by the urethral nerves and inhibiting the secretory action of these organs to a lesser or greater extent, producing suppression of urine, from the most complete and absolute to the slightest and most transient possible. In fact, urinary fever is suppression of urine. If the suppression of urine is complete or considerable the kidney naturally becomes engorged with blood, inflammation ensues, and in bad cases suppuration follows, and the patient frequently sinks into a state, often and deservedly called typhoidal, and dies. No doubt this suppuration is more likely to occur if there be surgical impurity in the bladder, and hence the necessity for careful antisepticism from the very commencement of any surgical urinary treatment. My view, therefore, is that while this urinary fever may undoubtedly run on and develop into septicism, it is not, primarily, blood-poisoning. A clear view of this subject will be an excellent guide in practice, helping us to prevent as well as to cure, it will save us from all the dangerous fallacies which result from huge and undigested statistics, from drawing conclusions from operations on one race of people and applying them to all other races, and it will make the history of urinary surgery clear, reasonable, and instructive, whereas without this definite

[1] Lecture II. was delivered on Nov. 14th and Lecture III. will be delivered on Nov. 21st.

understanding much may appear irregular, uncertain, and extraordinary.

In 1875, when I began practice, a man with a stone in his bladder was subjected to either perineal lithotomy or to lithotrity, and occasionally large quantities of small stones were simply washed out of the bladder by Clover's apparatus, a good instance of this latter operation being published by the late Mr. John Foster in THE LANCET of Oct. 10th, 1874, four years before Professor Bigelow published his paper on Litholapaxy. The woman with a stone was generally cut and boys and girls were always cut. Lithotrity was unquestionably an unpopular operation. The general surgeon was opposed to it, although Liston, Brodie, and Fergusson had all given it their countenance. Sir Henry Thompson, in his time, was almost alone in this country, as an advocate and champion of the operation, urging its adoption not as a substitute but as a complement to the operation of lithotomy. Sir Henry Thompson is without doubt the most prominent figure in urinary surgery during the latter half of the nineteenth century, and it will be my earnest endeavour to make clear the part which he has played and the principles which he has consistently adhered to throughout his career. He is happily still amongst us, but I speak entirely on my own responsibility. I speak strongly on this matter, for he has been, over and over again, unworthily attacked by those who, finding that he did not know and foresee everything, have failed to give him credit for the great work which he has done and have not been sufficiently generous to admit how much they owe to him. The early lithotritists of course had to practise without anæsthesia, and they found that patients bore badly the repeated introduction of instruments, and that the more instrumentation they underwent the more severe was the resulting urinary fever. This led Civiale, the father of lithotrity, to inculcate the importance of short sittings and of the employment of great gentleness, and it was with this teaching that Thompson was imbued when he began his surgical career in London. Sir Henry Thompson became emphatically the propagandist of gentleness in urinary surgery in this country. This principle of gentleness is a great one, and is still of vast importance, although the introduction of anæsthetics has made it subject to certain modifications. The lithotrites of 1860 were the ingenious and unhandy instruments of Brodie and Fergusson and the perfect instrument of modern days is entirely due to the suggestion of Thompson and to the mechanical genius of the elder Weiss. No one but the lithotritist can realise the value of the cylindrical handle which they introduced. For some years Sir Henry Thompson practised lithotrity, removing much of the débris between the blades of the lithotrite and leaving the rest to be expelled by nature's efforts, and it was not until 1866 that the late Mr. Clover's name began to be associated with the operation of lithotrity. In THE LANCET of May 11th of that year he first described his apparatus for evacuating the débris after the crushing of a stone. No one has ever done sufficient honour to the memory of Mr. Clover. He was an Englishman educated at University College Hospital, London, full of ingenuity and resource. His inventions were numerous and he was a pioneer in the modern art of anæsthesia, and in that art his inventions are still in use and are of great value. In turning his attention to anæsthetics it seems to me uncertain whether that art gained or general surgery lost the more. At any rate, his apparatus for evacuating stone after lithotrity is unquestionably the prototype of all modern evacuators, and in it lay the germ of the whole of modern lithotrity. It is curious in reading the early literature of this subject to note how right Clover was in everything he taught and pointed out from the very beginning. Twelve years afterwards, when Professor Bigelow of Boston introduced his evacuating apparatus, it consisted of Clover's syringe with the receptacle of glass below and the top connected with the evacuating catheter by a long flexible tube. Clover had taught and explained that the nearer the glass receptacle was to the penis the better, and after more experience Professor Bigelow accepted Clover's teaching and did away with all connecting tubing. Clover taught that the smaller the evacuating tubes, the less water would they contain, and therefore the brisker the current within them. Bigelow's immense tubes have been found unnecessary and Clover's smaller ones have been employed. Clover's tubes were short, Bigelow's were long, and now all our tubes are as short as possible. Every one of Clover's tubes was fitted with that most important adjunct, a flexible stylet. Bigelow's tubes had no such stylet, though he spoke of clearing his straight tubes with a rod, and now no lithotritist would use a tube without its being fitted with a flexible stylet, again showing how right Clover was. Clover's tubes had lateral plates or rings at the distal end. Bigelow's had not these lateral plates which permit of the easy rotation of the tube when in the bladder and of the compression of the penis, rendering the route to the bladder all the shorter; now every operator uses these plates or rings. I think all this makes it quite clear that even Bigelow himself, and certainly all his followers, had to go back to Clover's principles, and for these principles, I assert, sufficient acknowledgment has never been made to our distinguished countryman. I believe Clover never operated for stone in his life; if he had been an operator it is more than likely that using his evacuator, and with the assistance of anæsthetics, he would have anticipated Professor Bigelow by 12 years; instead of that he handed his apparatus to Sir Henry Thompson and contented himself with the administration of anæsthetics. The largest of Clover's evacuating tubes is No. 16, English, and I have the pleasure of showing it to-night, for he left a written request that I should have all his surgical instruments. This size is the one I still use. I rarely employ No. 17 or No. 18 and never any larger size. It is quite untrue to say that with Clover's apparatus only a little sand was washed out. With his No. 16 tube large fragments were removed and the apparatus was a very useful one. At this time (1866) Sir Henry Thompson was beginning to employ anæsthetics during his sittings of lithotrity, but only in private practice. In the hospital he still operated without chloroform, and in employing Clover's bottle there he found that while the patient bore the introduction of the lithotrite in the crushing of the stone with fortitude he would often complain, and that bitterly, when the bladder was distended in the operation of evacuation. This led him, thoroughly inspired with the importance of gentleness and of reducing the urethral shock to a minimum, to employ the evacuator without great enthusiasm. Still the instrument gradually forced itself into his esteem, and when I joined him we took it to every operation and invariably employed it. Our practice then was nearly all in private and the patients, therefore, were always anæsthetised. Here is a letter from Mr. Clover to me dated Jan. 29th, 1882:—

> MY DEAR BROWNE,—On referring to my notes I find that I gave the anæsthetic 130 times whilst Sir Henry Thompson performed lithotrity in the years 1876 and 1877, and in nearly all these cases he made use of the aspirator to remove fragments. The exceptions would not amount to 10 per cent.
>
> Yours truly,
>
> J. T. CLOVER.

During this period both Sir Henry Thompson and I would often crush a stone and wash it out entirely at one sitting. Mr. Clover, in a letter to the *British Medical Journal* of Nov. 16th, 1878, refers to my doing this, but we thought nothing of it, and it was only if a patient suffered severely from cystitis after a sitting of lithotrity that Sir Henry Thompson would, as it were, harden his heart, send for Mr. Clover to anæsthetise, and then and there clear out all the remaining débris, thinking it better practice to subject the urethra and bladder to considerable disturbance rather than allow the irritating fragments of stone to remain. But this was the exception and not the rule, and here we see distinctly that Sir Henry Thompson had the defects of his virtues, for if he had been less gentle he would have been more bold. And so we went on for three years, when in the autumn of 1878 Professor Bigelow proposed to treat calculi within the limits of lithotrity by crushing and evacuating *at one sitting*. The principle was soon recognised to be of the very first importance, and taking the profession all over the world as a whole it was accepted with remarkable openness and fairness of mind. There is no doubt that Sir Henry Thompson was surprised when he found how near he had been to the discovery of this great principle; we cannot say, without seeing it at all, for he had seen it, veiled, in a mist, but without realising its greatness and universal applicability. He would doubtless have accepted it at once had not the great principle unfortunately been overloaded by Professor Bigelow with the use of huge lithotrites and of large evacuating tubes. These large instruments offended Sir Henry Thompson's feeling of surgical respect for the male urethra and excited his dread of urinary fever. In my opinion Professor Bigelow was not altogether right or Sir Henry Thompson altogether wrong. As regards myself, I have done my work since 1878 acting upon Professor Bigelow's principle, but with my lithotrites and my evacuating tubes practically

unchanged, but employing Professor Bigelow's improvement of Clover's bottle, the improvement in that instrument consisting in putting the rubber syringe above the glass receiver instead of horizontally beyond it, while at the same time I have taken away Professor Bigelow's internal tube, reducing the interior of the tube to its original simplicity. Throughout I have been faithful to Sir Henry Thompson's teaching and have never failed in my respect for the male urethra, always using the smallest instrument practicable and in the gentlest manner. Bigelow's suggestion was, after all, only an extension of Thompson's teaching. Thompson was kind, Bigelow apparently more cruel was kinder still, to the parts concerned. Professor Bigelow, in addition to the use of large instruments, proposed to call his alteration in the method of lithotrity by another name altogether—namely, litholapaxy (λιθος stone, λαπαξω to carry off). This, I think, was altogether a mistake and unfair to lithotrity which was not superseded or rendered obsolete, but simply had its field of usefulness extended. The term "locomotive steam-engine" describes the crude "Puffing Billy" of George Stevenson, but it is quite as applicable to the most modern flyer just turned out of Crewe. Just so an extension of the operation of lithotrity which is still essentially a crushing operation needs no other name. I think, however, as I shall explain further on, that we want another name such as litholapaxy, but not in the sense employed by Bigelow.

It has often been asked, "What is a stone in the bladder?" My definition is that a stone in the bladder is concrete calculous matter which the patient is unable to get rid of naturally. A stone in the bladder may therefore weigh anything from two to three grains to several pounds. Even if a stone has left the bladder and being arrested in the urethra is pushed back into the bladder prior to its removal, it should still, I think, be considered a stone in the bladder. In fact, directly a renal stone is extruded from the ureter it becomes a stone in the bladder. When once the presence of a stone in the bladder has been detected the best plan to remove it has to be considered. It has not been generally recognised that there are really *three* ways of removing a stone from the bladder. It may be removed by vesical incision, lithotomy; it may be crushed and washed out, lithotrity; and it may be washed out whole through a tube; and it is to this latter proceeding that I would confine the term "litholapaxy." If these three operations are not admitted to be distinct, where, then, are you to put the calculi pumped out through tubes? They certainly cannot be entered under "lithotrity" and they certainly cannot be admitted under the heading of "litholapaxy," if there you record your lithotrities, without obvious unfairness and confusion. When Professor Bigelow established the fact that it was safer to crush a stone and suck out every particle in one operation than by several he wished to distinguish his single-sitting operation from the older and many-sitting one, and being by no means certain (only having an experience by himself and others of 14 cases) that it would entirely sweep away the old method named his operation litholapaxy, which merely means the evacuation or removal of stone. This new term might have been justified if lithotomy had been swept away as well as the old lithotrity, but as this is not the case I propose that the terms "lithotomy" and "lithotrity" shall stand, "lithotrity" meaning Bigelow's lithotrity, and that we confine the term "litholapaxy" simply to those cases where a stone or stones can be pumped out entire through tubes.

Litholapaxy, in my sense of the term, is the simplest and safest of the three methods, and if the stone or stones be small the operator should always attempt removal by means of tube and aspirator, and should only crush if the stone be too large to come through a No. 16, No. 17, or No. 18 (English scale) tube. Lithotrity, that is to say, Bigelow's lithotrity, lithotrity at a single sitting, is the operation for boys and girls, women and men, in all uncomplicated cases of stone in the bladder. Operators vary in skill and experience, and one man may be able to deal successfully with a large or a hard stone which would baffle a less experienced surgeon. Much must depend upon the individual, and the surgeon will be well advised if he subject his patient to lithotomy in all cases where he feels uncertain that he will be able to break and bring away every particle of stone at one single operation, for that is the essence of modern lithotrity.

It is when faced ith large stones in elderly and feeble men, and particularly when there has been long-standing prostatic or other obstructive disease, that I think the modern lithotritist should pause. Supposing that the stone is not mechanically beyond the limits of the lithotrite it must be remembered that the old man's urethra ill bears the repeated introduction of large lithotrites and tubes. The prostate may be so disturbed that no urine is passed afterwards except by catheter, and the mucous membrane of the bladder may be so injured that phosphatic deposits readily occur and plague and torture the remaining years of life. In many of these cases the interests of the patient will often be best consulted by the removal of the stone through a suprapubic vesical incision. Then there are many cases where it is impossible to clear thoroughly an old bladder from stone by instruments introduced through the natural passages. There is the post-prostatic or trigonal pouch illustrated by me in THE LANCET of April 18th (p. 867) and 25th (p. 922), 1891; there is the lateral prostatic pouch described and illustrated by me in the *British Medical Journal* of Oct. 12th, 1895; there is the post-trigonal pouch; and there are the regular sacculi, which consist of the protrusion of mucous membrane between the muscular fibres of the bladder. In all these pockets stones or fragments of stone may lodge and may defy the most careful attempts of the best lithotritist, not only to remove them, but even to detect them. The entrance to many of these pouches is very small and can only be got at by a suprapubic incision. Then the bladder itself in many of these cases is actually coated with phosphatic matter which cannot be got away with the lithotrite. I would say, therefore, that if on examining an elderly man his urine is found to be clear and free from pus and the stone is felt to be of uric acid or of oxalate, and not large, say, not over three ounces, it will probably be safe to perform lithotrity. But if the urine is purulent and alkaline, the prostate very large, and the stone large and phosphatic, I think in most cases the best result will be attained by a suprapubic lithotomy.

One of the old axioms in the art of lithotomy was that you should never cut for the stone without having felt the stone with staff or sound immediately before making the incision. The following experience shows that even this valuable old rule has its exceptions and proves what I have just stated, that we cannot dispense with lithotomy. I was called by Mr. Noble Bruce to see an aged gentleman. Feeling sure from his symptoms that he had a stone in his bladder I sounded him and at once came in contact with a stone which appeared to be one of fair size. I made all arrangements to perform lithotrity, and on the appointed day the patient was anæsthetised and I commenced proceedings, but do what I would I could find no stone. I tried every position of the patient and made rectal pressure in vain. The situation was one of great embarrassment and the anxious friends were eager for the news that all was safely over. After a most patient but fruitless search I was obliged frankly to tell them that I was satisfied that I had not been deceived, that there was a stone there, but that owing to a pouch or pocket of some kind I could not on this occasion even touch the calculus, much less seize and crush it. The patient took a day or two to consider matters and then consented to my performing suprapubic lithotomy. I found an extraordinarily deep post-prostatic pouch and at its bottom a stone measuring five inches in its largest circumference. The patient made a good recovery. It is the difficult cases that must be cut, and it is precisely the difficult cases where suprapubic lithotomy is the operation. I look upon perineal lithotomy as obsolete. No finger is long enough to explore thoroughly the bladder through a perineal incision and even if it be admitted that it is long enough to make a complete diagnosis, it is certainly not long enough to do any work in the bladder, to turn a stone out of a pouch, or to stretch and dilate the neck of such a pouch before getting out the stone. I have had several cases where nothing could have been done from the perineum, but the finger introduced suprapubically was able to get directly to the stone to stretch the neck of the sac, and finally with scoop or forceps to aid in the extraction of the stone. On one patient I was once obliged, in the course of five years, to perform three suprapubic lithotomies. He was an old stricture patient, and 10 years before I saw him had had a perineal section performed. From long-standing urethral obstruction the bladder had become badly pouched. In the trigone of the bladder there was a large pocket, which caught and retained the rather large calculi which constantly came down from the kidney. It was impossible to get these stones away except by suprapubic incision, they could be detected by the vesical sound, but could not

be seized by the lithotrite. With reference to the return of stone after operation I do not think statistics are important. It must be remembered that after either crushing or cutting the same constitutional conditions remain, and that the constitution may just as easily after one operation as the other form another stone. The same local conditions will also remain, so that if a phosphatic calculus quickly follows the removal of a phosphatic stone by lithotrity it does not follow that lithotrity is to blame. If, on the other hand, phosphatic calculus does quickly follow the removal of an acid stone by lithotrity, it is very probable that either the vesical mucous membrane was injured, became inflamed and offered a rough surface for the deposition of phosphates from the urine, or that fragments and debris were left behind. If lithotrity be undertaken it must be on the understanding that the operation must be completely finished, every particle of the stone must be removed. For this purpose it will be well to fragment and not to pulverise the stone. Pulverisation has been recommended, but this fine sand or mud is very difficult to entirely remove, it gets entangled in the mucous membrane and attracts phosphatic deposit, while fragments come away easily and are less likely to be left behind in the bladder. If a surgeon has been led by error in judgment to perform lithotrity in a case not altogether suitable for the operation, and if he thinks he has unavoidably left some particles of stone behind, or, indeed, if he has the least suspicion that such may be the case, I advise that in four or five days after the operation, either with or without the aid of an anæsthetic, an evacuating tube be introduced and an aspirator applied. It will be found that particles difficult to get away at the time of the operation will have become loosened and will come away readily. It is often justifiable to undertake lithotrity even when all the conditions favourable for lithotrity are not present. The patient may be too feeble for the surgeon to think him fit to bear incision. In these cases a second or final sitting of lithotrity to ensure as far as possible the removal of every particle of stone will be a wise proceeding. We thus see that in surgery as, in nature, there are no hard-and-fast lines of demarcation, few absolute rules, and that the rule of modern lithotrity to remove a stone at one operation has its wise and very proper exceptions. When the stone is very large I am altogether in favour of suprapubic lithotomy. By this incision we have complete command of the bladder, there is little hæmorrhage, the stone is easily manipulated and, if necessary, can be broken up and washed out. The delivery of a large stone suprapubically is not always an easy proceeding. I do not like forceps, which are apt to project beyond the stone, and so unnecessarily tear the bladder. The best instrument is a scoop, placed well under the stone, while the stone itself is steadied by the operator's left forefinger. There are many forceps for breaking up a stone after the bladder has been opened by the knife, and there is no reason why Forbes Keith's giant lithotrite should not be used in this situation rather than from the perineum as practised by him.

India has for centuries offered an unrivalled field for the performance of stone operations and there are surgeons there who can boast of such lists of cases that no surgeon in Europe or America can expect to equal. Dr. D. F. Keegan writes: "We need not look to England or to any country in Europe for guidance"; and it is he who has been chief in establishing as one of the principles of lithotrity that it is as applicable to children as to adults. Upon his suggestion the smallest tubes and lithotrites have been made, and children of the tenderest years, and even months, are now relieved of their vesical calculi without the knife. Dr. Keegan's teaching, I am satisfied, is as applicable to all as it is to Indian children, but when we come to adults, where the nervous system becomes involved through the sexuality of the urethra, and when the bladder from long-standing prostatic trouble becomes malformed and diseased, then I am satisfied that Indian experience will prove a false and dangerous guide. To paraphrase Dr. Keegan's remark, we need not look to India for guidance. I have been found fault with for speaking of the tolerance of the Indian bladder I have used the phrase in no carping spirit, for I have sincere admiration for the brilliant work of our Indian surgeons in calculous disorders; but when these surgeons tell us that we make too much of sounding for stone, that it is a trifling affair and needs no special care; when they tell us that vesical pouches and sacculi are easily cleared by the lithotrite of stone and that there is no need to lithotomise; when, indeed, they attempt to teach us that there is no need for lithotomy at all and that it is obsolete, then I say it is clear to me that they know little of the sensitive European or American and have failed to realise all the vesical troubles of extreme old age. The average stay in hospital of Dr. Keegan's adult cases was only 5 3 days—far too short a time for safety in England. Dr. Forbes Keith in his interesting paper on the Complete Abandonment of Lithotomy[2] relates such cases as the following. Case 1.—A native, aged 60 years, had his urethra opened by perineal incision. A phosphatic calculus, weighing two ounces, was crushed, and the bladder was evacuated of débris by instruments, some as large as No. 20, passed through the perineal wound. He went home cured on the third day. Case 2.—A youth, aged 18 years, afflicted with a huge vesical calculus, was so ill that after consultation with colleagues it was thought that operation must be followed by death. The urethra was opened from the perineum, a lithotrite was passed through the wound into the bladder, and the stone was seized and broken up by the repeated blows of a hammer. Three ounces of débris were removed and after two hours' work the patient was put back to bed. Four days afterwards the remaining four ounces of stone were similarly attacked and removed in one and a half hours. In three days the patient left the hospital, passing all his urine by the penis and being free from pain. No English urinary organs could be subjected to such treatment and recover in the time mentioned. To English surgeons this vesical tolerance in India is wonderful; we watch and we admire, but we must not be tempted to imitate. I am convinced that if we do we shall push lithotrity to dangerous extremes and bring it into discredit. Lithotomy will continue to live, it has existed for thousands of years. It is the useful partner, not the jealous rival, of lithotrity and litholapaxy.

A Post-Graduate Lecture
ON
THE ADMINISTRATION OF ANÆSTHETICS IN OPERATIONS ABOUT THE MOUTH, NOSE, AND THROAT.

Delivered at the West London Post-Graduate College on Oct. 21st, 1901.

BY RICKARD W. LLOYD, M.R.C.S. ENG., &c.,
LECTURER ON ANÆSTHETICS AT THE WEST LONDON POST-GRADUATE COLLEGE; ADMINISTRATOR OF ANÆSTHETICS AT THE WEST LONDON AND ST. MARK'S HOSPITALS.

GENTLEMEN,—In selecting the title of this lecture the fact that it is the first upon anæsthetics to be delivered as part of the ordinary post-graduate course of this college was overlooked. However, you may consider it a suitable subject of introduction as the cases in this class are among the most painful and ghastly in surgery and are thereby rendered almost inoperable without anæsthesia. They include operations which may immediately and directly save life, such as tracheotomy, and those which may also do so, or at least prolong it, such as operations for cancer in various situations in these regions and some which are for the relief of deformity such as hare-lip and cleft palate. With the advance of knowledge in nose and throat diseases very many operations are now performed which are for the comfort and well-being of sufferers and which no doubt indirectly prolong life. Many are for the removal of obstructions, such as arise from enlarged tonsils, adenoid growths, and abnormal conditions of the turbinate bones. These operations are, indeed, by far the most numerous in this class, and, being operations of expediency the chief danger of which lies perhaps in the anæsthetic, it is impossible to over-estimate the responsibility of the anæsthetist upon whose skilful administration greatly depends the opportunity for the successful conduct of operative treatment.

The administration of anæsthetics in these operations is particularly interesting because often more than one

[2] THE LANCET, Sept. 30th, 1893, p. 800.

anæsthetic and several methods of administration are beneficially called for in the conduct of the same operation, and on account of the various positions necessary during administration and operation. Ether is, no doubt, safer than chloroform, but where any of the operations we are considering takes more than a very few minutes neither gas alone, nor gas and ether, nor ether alone will be convenient during the operation on account of the necessary apparatus being in the way of the operator, and therefore chloroform is frequently used throughout the more prolonged operations or for continuing anæsthesia which has been induced by ether or gas and ether. Either gas or ether, as you are aware, is generally and best administered by what are known as closed methods, and chloroform (the administration of which by a closed method is too dangerous to be practised) should always be given by one or other of several open methods, on which account it is more applicable whenever the supply of anæsthetic has to be continued during an operation upon the nose, mouth, or throat. When ether has been given as a preliminary it is surprising how little chloroform is generally necessary for continuing anæsthesia, and not only is this so but the stimulating effect of the ether makes the administration of chloroform safer than it would otherwise be. The former advantage will be more appreciated by recalling some of Snow's conclusions.[1] He calculated that it was necessary for his second degree of narcotism that the blood of an average adult patient should contain about 12 minims of chloroform; for the third degree, 18 minims; for the fourth, 24 minims; and for the arrest of respiration, 36 minims. In Snow's first degree consciousness is not abolished; there are disturbances of special senses and sensibility. In his second degree the mental functions are impaired, not suspended. In the third degree voluntary movement is suspended, involuntary movement continuing. In the fourth degree the breathing is stertorous, the pupils are dilated, and the muscular system is relaxed; and in his fifth degree the breathing is difficult, feeble, or irregular, sometimes only diaphragmatic, respiration then ceasing and soon the heart also, as in death from asphyxia. The Royal Medical and Chirurgical Committee[2] found that atmospheres containing from 2 per cent. to 4 per cent. of chloroform vapour were attended with little or no risk to life, that 5 per cent. was sometimes necessary, and that stronger atmospheres induced alarming symptoms. Now, when a patient has been anæsthetised with ether much smaller quantities of chloroform need be introduced into the blood to keep up the different stages of anæsthesia than when chloroform is used throughout. Ether causes many patients, especially those with nose and throat disorders, to become very rigid, cyanosed, and more or less congested and swollen about the respiratory passages, and in such cases those symptoms often disappear when the ether is exchanged for chloroform after a few inspirations of the latter, but even in such cases the preliminary administration of ether is an advantage. There are special circumstances associated with these operations that may give rise to respiratory embarrassment, for it may occur on account of the relative positions into which the parts may be placed in the course of the operator's manipulations, or more or less occupation of the air-way by sponges, instruments, the fingers of the operator, blood, mucus, saliva, vomited matters or teeth, especially first teeth in children, that being loose may easily be pushed out of their places by the gag or instruments or fingers; or it may be induced by interference, in the course of the operation, with important nerves that directly influence the performance of respiration and the action of the heart; or by any combination of these conditions.

You may therefore be reminded that the function of respiration is dependent upon a free air-way and is controlled by the respiratory centre which is influenced by all afferent nerves, especially the vagi. The phrenic and intercostal nerves are the chief efferent nerves of respiration. Either excess of carbonic acid or deficiency of oxygen in the blood at first stimulates the respiratory centre but either in greater degree will paralyse it. And the circulation of the blood in the vessels is produced by the heart which is regulated by intrinsic nerves, giving rise to automatic rhythmical contraction, and extrinsic nerves, the latter including a cardio-inhibitory centre in the medulla with its efferent inhibitory nerves—the vagi—and a cardio-augmentor centre also in the medulla with its afferent augmentor nerves—the sympathetic. The calibre of the vessels is regulated by the vaso-motor centre connected with the vaso-motor nerves—including vaso-constrictor and vaso-dilator—through afferent and efferent nerve-fibres.

The interference with respiration and loss of blood necessarily associated with these operations prolongs the state of anæsthesia and renders a smaller supply of anæsthetic effectual in keeping it up than is necessary when painful operative proceedings are being carried out in other parts of the body while respiration is free or less obstructed. The risk of blood finding its way into the larynx, trachea, and bronchi in these operations makes it very advisable that the supply of anæsthetic should be small to avoid abolishing the pharyngeal and laryngeal reflexes. It is necessary only to supply sufficient to keep the patient quiet enough to avoid interrupting the operator. A patient may be able to move, to mutter, and even to spit without conscious sensation, and it is sufficient to keep up a degree of anæsthesia which just prevents these embarrassing actions. In some cases it is at times difficult to do this even by keeping up a constant supply of chloroform by means of Junker's apparatus through a tube in the mouth or nose. On the other hand, cases more commonly occur in which, with the same apparatus, it is advisable to allow frequent inspirations of air only from time to time, or dangerously deep anæsthesia results.

As long as the degree of anæsthesia indicated as suitable is maintained, the anæsthetist has always, so to speak, something in hand should emergency arise. In other words, the nerve-centres are not so deeply affected by the anæsthetic but that they may rapidly regain control on the relief of obstruction and the better supply of air, and there will be more time to bring about this, the best of all correctives for dangerously embarrassed respiration and heart during anæsthesia. When the centres are being exhausted by excessive hæmorrhage the arrest or control of the bleeding becomes of first importance. As soon as the bleeding ceases the blood-pressure rapidly rises.

We have to consider in any given case the thorough preparation of the patient, especially with a view to prevent vomiting, particularly of solids, which has been responsible for some of the recorded fatalities; the anæsthetic or sequence of anæsthetics to be employed; and the position of the patient during the induction of anæsthesia and during the operation. Local anæsthetics, cocaine or others, suffice for some cases, which cases must be left to the decision of the operator who will wisely be guided by the extent of the operation and the age and temperament of his patient. The application of a local anæsthetic as a preliminary to the administration of gas or other transient dose of anæsthetic is sometimes useful, allowing of a more prolonged operation. Cocaine applied to the throat impairs the laryngeal and pharyngeal sensation, and in excess causes respiratory embarrassment and cardiac failure, so that where it is to be followed by the administration of chloroform it should be used very sparingly and with the greatest caution. The selection of general anæsthetics will depend on the state and age of the patient and the nature and duration of the operation, and any special preference of the operator is to be considered. For short operations, such as the removal of the uvula, tonsils, or adenoids, for turbinectomy, and for the removal of some polypi, gas is sometimes sufficient. Where tonsils and adenoids, both inferior turbinate bones, or numerous or difficult polypi have to be removed gas generally gives insufficient time, and therefore gas and ether, or ether, followed if necessary by chloroform in the manner to be presently described, or chloroform throughout, especially in young children, is advisable. For removal of portions of the lip, the tongue, or either jaw, or similar operations, including tumours in this region, lupus of the nose, deflected septum, &c., either ether or gas and ether followed by chloroform are convenient sequences. Chloroform throughout may be given, especially in operations for hare-lip and cleft palate. Where there is a breach of surface on the nose or mouth the dressing may remain on while the lint, mask, or face-piece is applied, whether chloroform, ether, or gas and ether be used whilst first anæsthetising the patient. In some such cases, as, for instance, extensive removal of the tongue or extirpation of the larynx, the surgeon may consider it expedient to perform tracheotomy as a preliminary, and then with a Hahn's tube in the trachea, or a sponge in the pharynx if an ordinary tracheotomy-tube be used, the difficulties and immediate dangers of the operation are greatly reduced, as blood is

[1] Hewitt: Anæsthetics and their Administration, Macmillan and Co., 1901.

[2] Ibid.

thereby prevented from getting into the air-passages and the effect of spasm of the glottis, &c., is removed. The administration may then be continued by holding lint sprinkled with chloroform in the neighbourhood of the tracheotomy tube or by means of Junker's apparatus through a tube introduced occasionally into the tracheotomy tube. The administration is thus simplified, as it is not interfered with by any of the various complications which may arise in ordinary cases in the larynx or above it—e.g., spasm, falling back of the tongue, &c.

When chloroform is used throughout until the operation commences it may be given either on lint, a Skinner's mask, or otherwise, but during the operation it is much preferable and often necessary (as lint or other like apparatus would now be in the way of the operator) that it should be continued by means of a Junker's apparatus, the tube being detached from the face-piece and that being replaced by a few inches of gum-elastic catheter or pewter tubing, which is then held in the mouth or nostril, or the tube of the inhaler may be attached to a gag invented by Dr. Frederic Hewitt, which is a modification of Fergusson's gag, there being tubes running parallel with the jaws of the gag through which the chloroform vapour is pumped. When a gag is unnecessary the tube may be passed through the space of a deficient tooth or, if necessary, a prop may be used to avoid collapse of the tube from closure of the teeth upon it. If preliminary tracheotomy has been performed the administration will be continued as just described. If gas and ether or ether has been first used, when the change to chloroform is made at first it may be sprinkled on lint and it may be given in this way, though not very comfortably, throughout the operation, but it is a great advantage to all concerned to use the Junker as mentioned above, and this may be done from the time that the change from the ether is made. Care should be taken that the bottle of the Junker's apparatus is only one-third filled with chloroform and that the india-rubber tubes are correctly applied to the metal tubes, or in using it liquid chloroform instead of vapour may be administered. A fatal result of using the apparatus with the tubes incorrectly applied was once averted by the prompt use of the stomach-pump, tracheotomy, and artificial respiration.

In regard to position, it is usually most convenient to anæsthetise the patient in the ordinary or dorsal position and when ready to change the position to that selected for the operation, in which the convenience and wishes of the operator should be considered as far as possible, and it will often be necessary to vary the position during an operation. In operations for the removal of tonsils and adenoids there are several positions favoured by different operators and anæsthetists, chiefly with a view of avoiding complications arising from the effects of hæmorrhage. In one position the patient is on the side, the pillow having been removed; another is the dorsal position, the head being allowed to fall back over the end of the table; another with the shoulders slightly, and the head more considerably, raised on pillows, &c. I prefer the position on the side with the pillow removed and the face inclined towards the table; there is also some tilting of the head sideways towards the table on account of the shoulders raising the neck in this position, which is an advantage as it also favours the flow of blood away from the air-passages. And, generally speaking, when blood is freely flowing into the back of the mouth I think it a good plan to turn the patient more or less into this position to facilitate the flow of blood from the side of the mouth and the nares. It is generally unnecessary to do any sponging or swabbing out of the blood in this position, while in others it is often imperative. In the position with the head hanging over the end of the table hæmorrhage is encouraged, and there is danger of injuring the cervical spine by undue extension or strain.

For tracheotomy chloroform is preferable, and enough only to keep the patient quiet need be given, especially if the patient is in an asphyxial condition, when it may even be advisable not to delay at all and to operate without an anæsthetic. For the removal of either the tonsils or adenoid growths gas may amply suffice for a dexterous operator; indeed, it may sometimes be possible for him to remove all of these from the same patient under one administration of gas only, but an anæsthetic affording a more lasting anæsthesia allows of a more thorough and satisfactory operation, after which the growth will not be so likely to recur.

No hard-and-fast rules can be laid down as to the use of particular anæsthetics at different ages, as many circumstances besides age may direct the selection of one anæsthetic rather than another. Generally speaking, chloroform is preferable throughout the operation for children up to six years of age or older. After the age of 10 years, in some cases earlier, gas or gas and ether or ether alone may be administered, and supplemented, if the length of the operation demands it, by chloroform. Often chloroform may be preferred throughout. When gas or gas and ether only are used a prop placed between the teeth before the administration allows the gag to be introduced without loss of time on removing the face-piece of the inhaler. As stated before, the patient should not be deeply chloroformed, and it is often unnecessary to give more chloroform during the operation, which is performed during the several minutes which it takes for the patient to recover sensation. There may be more or less extensive movements of the patient towards the close of the operation, so that a nurse or other assistant should be entirely devoted to controlling these should they occur. The patient should be kept in a position that facilitates the flow of blood away from the air passages, and the gag should be retained until the patient is sufficiently recovered to be relied upon to prevent blood entering the larynx, &c.

When a cleft palate is being operated upon a firm pillow under the shoulders will allow the head to fall back, affording the operator better access to the region and allowing of the accumulation of blood in the direction of the pharynx and nares. Frequent sponging away of the blood is necessary. Chloroform will probably be used throughout the operation. During turbinectomy it is better to have the patient recumbent to avoid faintness as a result of the loss of blood and for other reasons already mentioned. It is also advisable to keep the mouth open with a gag, and this is so in any operation during which much blood may flow into the mouth or pharynx. In operating for deflected septum if the posterior nares are plugged as a first step much danger and trouble that may arise from hæmorrhage will be avoided. The chloroform is continued by means of a Junker's apparatus, the tube of which is held in the mouth which may be kept open by either a gag or a prop, if necessary. The due performance of respiration should always be looked for. The pulse (which quickens at first during the administration of chloroform and becomes slow when the patient is anæsthetised), will be a guide to the general state of the patient as well as to the depth of anæsthesia, in estimating which the sensibility of the conjunctiva and cornea will assist, and it is always reassuring to observe that the pupil is not dilated.

In the administration of anæsthetics for more prolonged and extensive operations the foregoing considerations should be kept in view and the methods described applied as occasion arises. Avoid danger and complications by inducing only a moderate depth of anæsthesia. By favourable position and sponging, if required, facilitate the removal of blood from the neighbourhood of the air-passages. By holding forward, on both sides if necessary, the lower jaw, this manœuvre will tend to prevent or relieve obstruction of the glottis which may have arisen from falling back of the epiglottis and of the tongue. Should difficulties arise discontinue the anæsthetic and assure yourself on those points; notice, also, the state of the complexion, respiration, pupil, and pulse. If necessary proceed to perform artificial respiration, taking care to have the tongue well drawn out and to perform it slowly—i.e., at about the normal rate of respiration. Laryngotomy may have to be performed, after which operation there is, of course, no need to draw forward the tongue while continuing the artificial respiration, and if a sponge be placed in the pharynx the entry, or further entry, of blood through the larynx into the trachea will be prevented.

After-effects are not generally severe and are modified by the nature, duration, and administration of the anæsthetic; the amount of blood which is swallowed influences the character of the vomit when vomiting occurs.

ISOLATION HOSPITAL FOR DEVIZES AND DISTRICT.—At a meeting of the committee of the Devizes Joint Isolation Hospital held on Nov. 4th it was decided to erect an isolation hospital for the joint urban and rural districts at an estimated cost of £9400.

IMPRESSIONS ABOUT CHLOROFORM AND ETHER.[1]

BY SIR WILLIAM MITCHELL BANKS, M.D., F.R.C.S., LL.D.,
SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

So much has been spoken and written upon the subject of anæsthesia that the question seems a very hackneyed one—one that would excite little interest in a society like this. But such is not the case, and such will never be the case while people continue to die under anæsthetics at the rate at which they do at present. During the last 10 years these deaths in England and Wales have just doubled, which is clearly out of proportion to the increased use of anæsthetics in the decade. When there are no more deaths there will be more discussions. But that time, I fear, will never come; for, whatever the drug used, if it can take such a hold upon the nervous system as to produce insensibility to pain and abolish the power of movement, it must be so potent a drug that its use will *ipso facto* imply danger. As regards any discussion which may follow upon my remarks I would hope that it may not be restricted to chloroform and ether alone, for I have only selected these because I cannot speak from great experience about others, while I venture to think that I can about them. When I was a fourth-year student Professor Syme appointed me to be his chloroformist, and for six months I anæsthetised all his hospital patients. After coming to Liverpool I gave chloroform to nearly all Mr. Edward Bickersteth's private patients for six years, and saw all the operations performed at the Royal Infirmary. As assistant surgeon and surgeon to that institution and in my own private practice I must now have seen many thousands of cases of the administration of chloroform and ether. I have been over 34 years in Liverpool. Reckoning 42 working weeks in each year and reckoning that I have seen six cases in each week, the total number seen is about 8500, or nearly one-half of the chloroform and ether cases recorded in the British Medical Association report. I feel sure that you will not think that I mention these facts in any spirit of boastfulness. I do so merely to show that my experience has been sufficient to entitle me to put my own views before you as forcibly as I can. A certain amount of dogmatism is always a good thing, for it arouses the spirit of debate and so the truth comes out. This society of ours is an appropriate place wherein to discuss anæsthetics, for it is interesting to remember that the chemical product termed "chloroform" was first discovered and made by a Liverpool chemist, one Waldie, who managed the Apothecaries' Hall in Colquitt-street; and that Liverpool was probably the first place where the use of ether was extensively practised after having been long supplanted by chloroform in this country. In America ether had always retained its place as the chief anæsthetic and I well remember many years ago Mr. Reginald Harrison bringing to the infirmary an American surgeon, whose name I forget, but who showed us how to use it. He folded up a towel like a cone. Then he took a sponge and saturated it with ether. Wringing the excess of ether out of the sponge on to the floor, he put it inside the towel and stuck it down over the patient's face. We thought this a very wasteful process, and perhaps it was, but it was good sense after all, for it embodied the principle of "Plenty of air and plenty of anæsthetic," and that I believe to be the fundamental principle which underlies all others in the giving of anæsthetics.

PHYSIOLOGICAL EXPERIMENTS AND STATISTICAL COMMISSIONS.

No one for a moment will consider me as holding in contempt either experiments or commissions as such, and what I say I say with regret, but my firm conviction is that neither of them has hitherto been of the least avail in aiding us in our search for the best anæsthetic or for the best method of using it. What special and particular good came out of the Hyderabad Commission I never could see. There is no possible comparison between a healthy dog or cat or any other animal and a diseased human being. They are not in the least under the same conditions, and experiments upon them are therefore useless. Take on one side a healthy retriever with its heart and arteries all sound, and without knowledge of what is going to happen to it, consequently without the least fear or anxiety. Take, on the other hand, a middle-aged, somewhat corpulent woman with flabby heart and somewhat inelastic arteries. Suppose her to be the victim of some cancerous disease the knowledge of which has worn her out with anxiety and distress, and then let her pass a sleepless night before the operation, going over and over in imagination all the terrible process and making sure that she will die under the anæsthetic. Or take your drunken, whisky-sodden dock-labourer, with tissues so steeped in drink that one is almost tempted to believe in the possibility of spontaneous combustion, with cirrhotic liver, fatty heart, and albuminous urine. I cannot see any parallel whatever between the healthy canine animal and the diseased human animal, nor can I see how experiment upon the former will help us with the case of the latter. It is impossible. I trust that no lying anti-vivisectionists will take hold of my words and twist them to suit their own ends, as is their wont. For although I honestly cannot see where experiments upon animals have given us direct aid in our quest after securing safety for human beings I am very glad that they have been done. Unless it had been so we should always have remained uneasy under the fear that perchance we might have lost something of value from this source, seeing how much has been learnt from it in other conditions. Moreover, the most virulent anti-vivisectionist cannot complain of any cruelty here, seeing that the animals used have simply slept themselves peacefully and painlessly into extinction.

With regard to the report of the British Medical Association Commission on Anæsthetics, which has recently been made public, one cannot but feel the greatest admiration for the immense pains taken by the members of that body, which came into existence in 1891 and included among its members some of the most eminent men in our profession. One knows, however, as a matter of fact, that in all committees it is the secretary who does the real work. To Dr. Child, the secretary of the General and Executive Committees, and to Mr. George Rowell, the secretary of the Analysis Subcommittee, every medical man (and especially every man who has been a secretary himself) will give unstinted praise for their protracted and laborious work. But at the end what does it all amount to? *Hen! Nil.* In a very able analysis of the report Mr. George Eastes, the treasurer of the Commission, says concerning its conclusions: "The most important conclusion is the last, that by far the most important factor in the safe administration of anæsthetics is the experience of the administrator and that in many cases the anæsthetisation is of such importance and gravity that it is absolutely essential that an anæsthetist of large experience should conduct the administration." As a result of not having discovered anything that we did not know previously I have heard and read of not a little girding at this report. Now, I think that this is not deserved. While it is a great matter to find that certain drugs or methods of treatment are valuable in such-and-such a disease, it is no little thing to have found out that certain other drugs or methods of treatment which looked promising are quite useless. It prevents future investigators going painfully and laboriously over the same ground and it makes us feel comfortable in our minds in the knowledge that one path of information has been looked into, has been found wanting, and is now walled up. But it has been suggested that we still lack an experimental examination of the statement that by proper application of a volumetric method anæsthesia of any required degree can be certainly effected, and that we should carefully determine the percentage of chloroform in the fluids and organs of animals variously anæsthetised. By all means let the inquiry be made. All scientific knowledge is valuable. An investigation, though useless for the purpose for which it was originally intended, has often elicited facts which have proved very valuable for some other purpose. That the investigation now suggested is likely to be of any more value than its predecessors I do not for one moment believe. In the first place, I have stated that I do not think that deductions from experiments on animals in relation to anæsthesia can be used in the case of human beings. In the next place, the simple adage that no two people are alike prevents anything like a uniform treatment being applied all round. We know how the same dose of a drug will act upon various people in the most various ways—how even articles of diet which are

[1] A paper read before the Liverpool Medical Institution on April 25th, 1901.

nourishing and sustaining to the majority of people are practically poisonous to not a few. There are some persons whom the eating of an egg will make very ill. Now alcohol, after all, may perfectly well be compared with chloroform or ether or any anæsthetic. A glass of whisky and soda-water at dinner is a wholesome stimulant to many people and enables them to digest their food, but keep pouring whisky steadily into an individual and he will in time become unconscious, lose his muscular power, and be reduced to a state of anæsthesia. Nay, there are plenty of instances where barrels of spirit have been broached in the street and where unhappy wretches have drunk it to such an extent that they have lain down in the kennel and died poisoned. This is just what chloroform does, only it does it more rapidly. But how can we of set purpose regulate such effects with precision? In the case of a young, frail girl, absolutely unaccustomed to the use of stimulants, a single glass of whisky will make her practically drunk, while a seasoned coalheaver or foundryman will swallow a pint and make no sign. How could we "control the dosage" of whisky to two such people by any rigid physiological application of a volumetric method? So, also, the proper dose of chloroform can only be estimated and regulated by the person who is administering it, and for that he must depend upon his knowledge of the power of the anæsthetic which he is using and upon his judgment, gained by experience, of the ability of the patient before him to inhale certain quantities of that anæsthetic with safety. I am one of those who in things medical place more reliance upon the "impressions" of a sensible man with good powers of clinical observation guided by experience than upon any *a priori* physiological deductions. In June last Dr. Burney Yeo delivered an admirable address to the British Balneological and Climatological Society. He said with reference to the publication some 30 years ago of the Edinburgh Committee's research on the action of mercury on the liver:—

> The supposed results of this research were that mercury, so far from increasing the flow of bile, caused its diminution through its general depressing effect on the entire organism, and the reporters added that the practical advantage of demonstrating that mercury is not a cholagogue could not be too highly estimated. Now, gentlemen, what is the teaching of physiologists at the present as to the action of calomel? It is that although calomel does not really cause an increased flow of bile it acts on the bile-expelling mechanism and promotes the flow of bile into the intestines. Was more than this claimed in calling calomel a cholagogue? Well, we now no longer hesitate to prescribe calomel for fear of being thought "unscientific." Indeed, calomel is, I should say, nowadays used as extensively as ever it was in the treatment of chronic disease, especially in functional disorders of the stomach and liver.

By which words many persons have doubtless been much heartened and have taken their blue pills and seidlitz powders with a fuller sense of security in their effects. For after all medicine is essentially an empirical art; which brings us back to our simple but all-important key-note, "Plenty of air and plenty of anæsthetic."

WHETHER IS CHLOROFORM OR ETHER THE MORE DANGEROUS.

Some years ago there were quite serious disputes as to whether death from chloroform began from the heart or from the lungs. These academic speculations need not trouble us. Be it chloroform or ether or alcohol it is absorbed by the capillaries of the lungs or stomach and is conveyed to all the nervous centres, which in due time it poisons and so abolishes their functions. It both enfeebles the heart and paralyses the respiratory muscles, so that clearly death does not take place from the heart alone or from the lungs alone, but from both. This statement, be it remembered, applies to pure and simple poisoning from an overdose of the drug and not to cases where the patient has died suffocated from his tongue being allowed to fall back.

As to whether chloroform or ether is the more dangerous the physiologists have long been aware that in the case of animals chloroform is infinitely the more dangerous, and therefore in experimental inquiries demanding an anæsthetic they use ether. As for the clinical statisticians, in their report they assign to chloroform a danger-rate of 0·582 per cent. and to ether one of 0·065 per cent., so that according to these figures chloroform is nine times more fatal than ether. But after all surgeons found this out for themselves in a very brief period after the reintroduction of ether into this country. Still, it is a comfort to be confirmed in one's view by the physiologist and the statistician.

Suppose it became necessary for a surgeon to put a person to death by means of an anæsthetic, which one would he choose? There is nobody who would not at once say, "Chloroform, to be sure"; and the reason is simply this, that up to a certain point chloroform is a depressant, while ether is a stimulant. To discover this you have only to look at the face of the patient and to feel his pulse. Taking chloroform first, let us put aside certain cases where, after a brief period of inhalation, the pulse becomes stronger and steadier. This is due to the fact that the patient before the operation was a prey to serious mental distress and anxiety. When insensibility comes on fear vanishes and the heart works with better will. But, putting these special cases aside, it may be said that as a general rule as the inhalation of chloroform goes on the pulse weakens and the face becomes pale. With ether, on the other hand, the pulse becomes quick and full and the face becomes congested. Ultimately it and especially the ears become livid. In order to get students to grasp these differences I often speak to them of the White Man and the Blue Man. The White Man is being poisoned by chloroform and is always in a dangerous way. His heart is working very feebly and at any minute may give out. The Blue Man, it is true, ought not to have been allowed to become blue, but still he is not in such straits as the other. If he can get a little air into his lungs to oxygenate his blood it will still be very hard to kill him.

THE EARLY SIGNS OF DANGER.

With a few exceptions I cannot say that I have ever felt very anxious about the performance of any surgical operation, because I have never been ashamed to beat a retreat in time if things were going against me. But the anæsthetic always has been and always will be to me a serious source of dread. I have therefore always maintained a careful watch on the progress of the anæsthetisation. I believe that there are anæsthetists who maintain that they are supreme in their own place and will not be dictated to by the operating surgeon. Personally, I will have nothing to do with any anæsthetists making any such pretensions. A serious operation is a kind of pitched battle between the surgeon and death. The surgeon is the general; the anæsthetist commands a brigade. If the latter so mismanages his brigade that the battle is lost, upon whom does the disgrace fall? Upon him? Not for a moment: upon the general, the surgeon. It is he who has to face the dead man's relatives and to explain matters as best he can in the coroner's court. And, when the event is spoken of afterwards, it is not mentioned as having occurred in the practice of the anæsthetist, but in the practice of the surgeon. I therefore hold that, in the matter of the anæsthetic, the surgeon should be master over the management of that, as over every other detail of the operation.

In all polite circles, when any unpleasant statement is made, the company present is always regarded as beyond implication, so I hope to offend nobody here by saying that I do not believe that all deaths from anæsthetics are due to unavoidable causes. After a death from an anæsthetic we are all familiar with the performance that goes on before the coroner and how the jury comes to the conclusion that the patient died from an anæsthetic properly and skilfully administered. In my own experience I have only had two deaths, both from chloroform, and I am quite willing to believe that they were unavoidable. But the number of hair-breadth escapes which I have seen is alarming to reflect upon. In some cases it seemed as if life had really gone and only by the most energetic measures was it brought back—measures which required all one's coolness and fortitude to carry out and which left one utterly exhausted with the mental and bodily strain. I am prepared to admit that in one instance the fault was my own. It was a case of cleft palate in a child where, although the patient was not breathing properly, I yet directed the chloroform to be continued in order that I might get in the last stitch in the uvula. Then came what is called the collapse—that is to say, the patient, not having had enough air for a good while, gave up the struggle. Luckily, the accident was due to the mechanical hindrance of a proper amount of air getting into the lungs and not to direct poison from too much chloroform. With two strokes of a knife I opened the trachea and by squeezing and dilating the chest-wall we got air to enter the lungs and the child recovered. The reports of fatal cases read all alike. They tell how, after the administration of a certain amount of anæsthetic (always astonishingly small, by the way) and occasionally of more or less struggling the patient, with whom everything up to a certain moment has been going as merry as a marriage-bell, "suddenly collapses." This is what I do not for a moment believe. In the

majority of cases he does not suddenly collapse. He has been in a really dangerous way for some time before he collapses, and the real cause of the collapse is the inability of the anæsthetist to recognise the early symptoms of danger and to avert it in time. That is my firm conviction. By anæsthetist I do not mean the special administrator of anæsthetics, so that, should any be here to-night, I pray they will not think that I am delivering an attack upon them. By anæsthetist I mean simply a person—any person—who happens to be giving an anæsthetic. I do not, furthermore, even wish to attach great blame to that person, for I believe that he acts in ignorance, from the fact that he has never been sufficiently trained to recognise the tremendous potency of the drugs he is working with and to know the precise moment when their administration crosses the boundary line of safety and enters the territory of danger. It is not so much his fault as his misfortune. Some men I have seen, it is true, who seem utterly incapable of sniffing danger afar off. It is not in them. They literally cannot see further than their noses. But in this the members of the medical profession are not in any way different from those of any other profession or business. Men enter it who have no real gift or aptitude for it and every now and then such men make serious mistakes, and always will do as long as human beings are what they are. But our business is not to look on at these mistakes and say that they are inevitable, but to strain every nerve to reduce their number. This is only to be done by looking at uncomfortable facts with open eyes and with a determination not to blink them.

Too Little and Too Much Chloroform.

There is one kind of anæsthetist who has no appreciation of the axiom, "Plenty of air, plenty of anæsthetic." He drains out his chloroform by the drop. Having poured a few minims on the mask, he then pulls up the patient's eyelid and begins fumbling at his cornea; then he feels his pulse and thinks it is very rapid or else getting very weak, and so keeps the surgeon in constant hot water. The patient being now fairly awake gets a little more chloroform and the cornea-fumbling and pulse-feeling begin again. This process goes on for a considerable time until finally, by the time that complete anæsthesia has been attained, the patient has inhaled a large amount of anæsthetic and goes very deeply under. Then he "suddenly collapses." There is another kind of anæsthetist who seems utterly unaware that he is dealing with a poison which of itself will kill if only enough is given. Some patients take their chloroform very quietly with a somewhat shallow breathing. They lie motionless and the operation begins and goes on. All the time the chloroformist keeps pouring on his chloroform, although the patient is deadly quiet, until this one also "suddenly collapses." This variety of chloroformist absolutely refuses to see that when the patient is not feeling pain he should stop his anæsthetic. But he does not. He simply keeps pouring it on and consequently poisoning his patient, for whatever anæsthetic is over and above what is necessary for surgical purposes is poison. I think that the action of some surgeons is in part responsible for this. If the patient comes out and struggles a little many a surgeon gets angry with the anæsthetist. For my own part I always assure him that I will be quite ready to wait till the patient is over again, and meantime he is to play with a light hand. For in truth a great secret is always to keep the patient on the balance: just on the point of coming out. What does it matter if he does cry out occasionally? He will never remember anything about it afterwards and meantime you know that he is alive and well. When he is long deeply under, when he is long silent and motionless, then it is that the silence and immobility of death descend upon him with great suddenness. This steady administration of the chloroform when there is no need for it is a very grave mistake, for it puts the patient in the most critical position possible—viz., that which results from pure uncomplicated poisoning. In those cases, even when the patient has been rescued from immediate death, he will remain for hours and hours in a very dangerous condition, subject to constant relapses. This is because time alone will enable him to get rid of his superfluous chloroform by exhalation.

Imperfect Breathing.

There is another condition where the patient is put in great danger—viz., the inability of the anæsthetist to recognise whether the patient is breathing fully and freely or only getting into his lungs a small modicum of air and that filled with chloroform. To kill a dog by suddenly blocking up its trachea takes about four minutes and it is probably much the same with the human being. It is true that even the most ignorant or careless anæsthetist never completely deprives his patient of all breath for that time, but then it must be remembered that the patient is partially poisoned with the anæsthetic already, and if you annul a large amount of his respiratory action and still give him nothing but anæsthetic to breathe you are keeping him in a dangerous way, so that the form of "sudden collapse"—coroner's court collapse—to which I have alluded, is liable to come on at any minute. It is most distressing to hear a patient going on with this imperfect respiration while the anæsthetic is being quietly piled on and no attempt at relief given. Sometimes the stoppage is complete, and so great are the patient's struggles to get air that his chest-wall moves up and down with the frantic efforts which he is really making to respire, although lying perfectly quiet. Now open his jaws with a gag and pull his tongue well forward and you will hear such a respiration as makes you take a deep breath yourself from mere sympathy. I cannot at all understand the aversion which some people profess to entertain against the use of the tongue forceps. It has been denounced as barbarous and cruel in very severe terms. This is simply childish nonsense. If there is any safety to be got by pulling the tongue out, a little discomfort lasting a few hours should not be considered for a moment. Many years ago the American surgeon, Dr. Howard, in my opinion did a great deal of harm by promulgating the doctrine that pulling the tongue forward did no good. To begin with, I cannot conceive how any man who has once heard the gasp of air given by a patient whose tongue has fallen back and been pulled forward can doubt the efficacy of the process. In the next place, I made several dissections from the side of the neck on the cadaver, noted the position of the base of the tongue and saw how it was pulled up at once by the forceps applied to the tip. There does not seem to be any mystery about the process, except what is made. It is essentially a mechanical affair. The muscles that keep the tongue forward are not very strong. We see that practically when we have divided them in removing the fore-part of the organ, when its base falls back at once and when it is for a while necessary to keep a string in it ready to pull it up in case of the patient choking. It is partially drawn back and partially falls back on to the top of the epiglottis and closes that lid on the box of the larynx. Pulling forward the angles of the jaw does practically the same thing as the forceps, only in a very minor way, but in many cases where I have seen patients in danger from obstructed respiration I have also seen much valuable time lost from fumbling about the angles of the jaw in place of promptly opening the mouth and pulling the tongue well out. Even then some small gags with absurd handles about two inches long are often used with which great difficulty is experienced in getting the jaws apart. I believe that to the anæsthetist far more valuable than all complicated inhalers are a powerful big-handled gag and a first-rate tongue forceps. When the so-called "sudden collapse" has occurred even seconds are of value in getting air into the lungs and so oxygenating the poisoned blood.

Period of Struggling.

A dangerous time in the giving of chloroform is the struggling period. Some persons sink quietly into anæsthesia without a sound or a movement. Others fight and struggle as if they were possessed and during the whole operation seem only to know two stages: they are either so deeply under that they are practically in danger, or out of this state they almost immediately jump into a distressingly lively condition which is a bar to further progress. What volumetric dosage will help us in these opposite conditions where the question is entirely personal to the patient and where the anæsthetist can only trust to his personal experience to carry him through? I think the danger of this struggling period is getting more fully realised now. When I was a student the unfortunate and excited patient was laid hold of by half a dozen dressers and nurses and forced down straight on his back again, while the chloroform was piled on hard by the anæsthetist. Nothing can be worse policy. Look at his contorted cord-like muscles and swollen veins; look at his rigidly clenched teeth, his glaring eyes, and the beads of sweat standing on his forehead. The efforts he is making to sit up are almost superhuman. His heart is almost bursting with its efforts. Let him sit up. He will not be more difficult to manage, but less so, for he

will not fight so much with his arms and legs. Take away the anæsthetic till he has got a few good gasps of air into him and then bring it back but not close down on his face, and as he shifts his head about to get quit of it keep following him with the utmost rapidity. In a little he will probably begin to talk or shout a little nonsense and then sink quietly and safely back on his pillow. I believe that following the old method was the reason why many persons sank back at the end of a struggle on their pillows dead.

DANGERS OF CHLOROFORM AND ETHER.

I think, then, that the great dangers of chloroform are: (1) absolute overdosing of the patient up to the poisoning point when there is no necessity for it as regards the operation; (2) an omission to allow the patient to be constantly and freely getting abundance of air into his lungs; and (3) violent repression during the stage of excitement combined with continued dosing with chloroform. Now it may be said that it is surely very easy to watch all these conditions; but it is not, from the fact that there are no two individuals alike as regards the way in which they take anæsthetics, just as there are no two people alike as regards their faces. Out of hundreds of thousands of persons whom one may pass very speedily in a brief time in the streets of a big city and who have eyes, noses, mouths, ears, all fashioned on the same type, we instantly pick out our friends. A good chloroformist rapidly seizes upon the leading features of his patient as regards his capacity for standing the drug and administers the volumetric dosage by rule of thumb, as will always be the case, if safety is to be the main consideration. At the same time, it is impossible to over-estimate the care which should be devoted to a chloroform case during the early periods of the administration. It will be noted that it is nearly always during the earlier periods that the fatalities occur. In the case of a prolonged operation after a while the patient lies quiet, as a rule, and does not need the anæsthetic except at intervals and then a very small dose serves to render him quiet again. There is therefore less likelihood of an unexpected failure of the heart. The chloroformist gets due notice and has time to warn the operator that it is time to wind up, inasmuch as the patient, between them, is quietly but plainly getting weaker. The danger is most between six and 10 minutes from the time the anæsthetic is commenced and during that time the anæsthetist's eye should never be off the patient's face for one instant. The slightest shade of pallor should be noted and the patient should be at once revived; upon the slightest difficulty of breathing his tongue should be instantly pulled out. Were these things done in time the cases of sudden collapse would become wonderfully fewer.

With regard to ether, the great point here is to keep the larynx free from frothy sticky mucus. Some people under ether secrete a vast amount of this from the mouth, fauces, and larynx. This they keep sucking down the trachea into the lungs, which get choked up with it, just as they used to do with blood in former days during operations on the tongue before one began to do a preliminary laryngotomy. Then the patient becomes a Blue Man. But if his jaws be well forced open with a gag and the mucus be swabbed out he recovers. It is to be noticed that among the deaths from ether a few have occurred from pieces of vomited material having been sucked down tightly into the larynx. Surely this is a preventable matter. Moreover, when it has occurred, why have the patients not been saved by a prompt laryngotomy? There are two difficulties about ether. One is that it is neither so pleasant to take nor so easy to give as chloroform, but in consideration of its superior safety these ought not to be so much considered as they are. It ought certainly to be more frequently used. The other is that in certain operations, more especially such as have to do with the anus or urethra, it seems impossible to get the muscular action subdued in certain people by ether. There is nothing for it in such cases but chloroform and that in fullest amount. I am always very fearful about the anæsthetic in operations for hæmorrhoids. But the great point about ether is that it is more difficult to kill a man with it than with chloroform. In both the chloroform fatalities which I have seen the patient was stone dead by the time my attention was drawn to them: face pallid, jaw dropped, and eyes staring wide open with big dilated pupils. You never see anything like that with ether.

WHICH MAKES PEOPLE MOST SICK, ETHER OR CHLOROFORM?

I am sure more people are sick under ether, but I am also sure that when a bad sickness, lasting for a long time, occurs, it results from chloroform. Ice and small mustard poultices over the epigastrium seem to do as much good as anything else.

METHODS OF REVIVAL.

To begin with, I do not believe galvanism to be of the slightest use. Furthermore, galvanic batteries are hardly ever in order when required, and even if they are in order it takes too long to get them in action. By the time one of these things gets to work the patient is either dead or in safety again. If with chloroform as the anæsthetic the patient be in danger from overdosing and from having had too little air so that he has been both choked and poisoned we want to do two things—viz., to get air into his lungs and to get blood into his brain. Let someone jump on to the table and hold the patient up by the legs with his head dangling over the end, let his tongue be pulled out, and let Silvester's method of artificial respiration be resorted to. Slapping with wet towels and many other minor means there are with which everybody is familiar. For some time there have been in use small capsules of amyl nitrite ready to be broken and inhaled. Since their introduction I have never been in such straits with an anæsthetic case as to be driven to use them but I should think that that drug would be of use. I am certain that I have seen good come from subcutaneous injections of ether or strychnine. With ether as an anæsthetic we have noticed that the danger is almost entirely from choking—from the bronchi and upper air-passages getting choked up with froth and sticky mucus. Mopping out the throat and larynx is the great thing here until the patient can be got to retch or to strain and then he comes speedily round. Moreover, his head should not be hung down, but rather the reverse. Failing success with these methods I would open his larynx, get in a tube, and blow air into his lungs while using Sylvester's method also.

But there is a small and very simple dodge which is a very effective means of rousing up a patient from a weak fainting condition if it be used sufficiently early. It is so simple, however, and so devoid of all scientific parade that I do not suppose any high-class anæsthetist could be got to use it. A great many pupils of mine have been taught to use it during many years past and it rejoices among them in the name of the "dry shave." It is known that certain cutaneous shocks induce the respiratory muscles to act—a jump into cold water, smacking with a wet towel. Now when a patient's lips and general countenance begin to get somewhat pale and his breathing very weak, while he makes no sign of movement and lies painfully quiet, if you take a rough towel and rub his lips and nose vigorously up and down with it you will see the colour come into his lips again, his chest will begin to heave, and he will usually make some movements with his head to get out of the way of the rough towel. In short, he rouses up from his fainting state. I know this much from long experience, that if a man does not show any sign of reviving circulation and respiration after a vigorous rubbing of his lips and nose up and down (not sideways) with a rough towel he is in an uncommonly bad way. I have seen a clever anæsthetist keep a most feeble woman safe through a prolonged operation by, so to speak, constantly bringing her up to the surface by this means, and so never allowing her to get too "fainty."

PRACTICAL POINTS IN ADMINISTRATION.

As to apparatus the best apparatus is always the simplest. I believe in the simple Skinner's mask, because it allows of most of the face being seen and because, however much chloroform may be poured on it, even until it runs down the patient's chin, there must of necessity always be plenty of air going in with the chloroform vapour. For giving ether men have their own favourite instruments. Ormsby's inhaler and Burton's inhaler seem popular. With my partiality for free admission of air I like the original American one with bandage webbing stretched up and down on a wire frame which is inside a rubber cover. As for those great apparatuses which people wear on their backs (like Parisian lemonade-sellers) or the apparatuses with stopcocks which profess to give regulated quantities of anæsthetics, my notion is that as anæsthetics have to be given in country cottages and in the houses of the poor dwellers in cities as well as in those of the rich, such apparatuses need not be used. The student should be taught to use the simple tools with which he is likely to go into practice. We have tried beginning with nitrous oxide gas and going on direct to ether at

the Liverpool Infirmary, but it does not seem to have found much favour.

Concerning stimulants before anæsthetisation I know that some people object to them because they say that they cause sickness, but this is because they are not given properly. A small quantity of brandy is given in a lot of water about half an hour before the operation. This the patient promptly vomits. The brandy should be neat or with just such a little amount of water added as will enable it to be got down. From one and a half ounces to two ounces for a woman and three ounces for a man is not too much. Let it be gulped down like physic just before the anæsthetic begins, then the patients are not sick. Many a timid, weakly woman after a good big dose of almost raw brandy needs very little anæsthetic indeed. In the pre-chloroform days they made patients half stupid with brandy and laudanum, and it was wonderful how it enabled them to endure pain. I helped once to put in an old medical man's shoulder. He would have no anæsthetic, but went out and got his brandy and laudanum and in about 20 minutes sat down and had the shoulder put in without moving a muscle.

I often give students a lesson. You will see an inexperienced hand jam the inhaler down over the patient's face and choke him. Then the patient fights for life, sits up, and refuses to have any more. The mask should be loaded with anæsthetic as full as it will hold, but it should be held a long way above his face and only brought down to it by slow degrees. Meantime there should be absolute silence everywhere. In private practice nurses seem to delight in fussing and knocking about basins and pots with as much noise as possible, while the surgeon and others are all talking about astonishing cases they have just had. This din excites and agitates the patient, who hears fragmentary sounds and does not know what to make of them. Having got all quiet, I tell the patient to count after me up to 100. A German surgeon showed me how to do this properly. He counted very slowly; then he began to sing the numbers in a drawling tone and finally he performed a sort of chant. I always do this. It seems to lull the patient to sleep, who will often follow the very cadences of the anæsthetist. A large number of persons will cease counting somewhere about 50, if they have had some brandy and all around is silent. I am sure it is far better not to say anything to a patient: it only rouses him up to think.

As to anæsthetics at various ages, I have noticed that infants and very young children get horribly pale under chloroform and have to be carefully watched, but they take it easily, although they often require a great deal. It will be often noticed that boys, say of about six or eight years of age, rapidly fall into a kind of false sleep and look as if they were well over, but if you touch them they shout lustily and kick, so that you have to give them a large amount of anæsthetic, after which they are apt to sink into a very deep sleep, from which they are slow to be awakened.

No bronchitic or asthmatic subject should be given ether and I believe that chloroform is by far the best anæsthetic for very old people. With a little previous brandifying they take it quite sweetly and recover quickly. I have had it given to two males, one 84 and the other 82 years of age, during the past week and nothing could have been pleasanter than the chloroform. Of course, on such very old people only such operations as are speedy of execution and can be done without great shock or loss of blood are admissible and, therefore, no great amount of chloroform is required, but to hesitate about giving it to a healthy old person is quite a mistake.

We always examine a patient's heart before anæsthetisation. It is an odd proceeding after all, for the form of heart disease—dilatation or fatty degeneration—can never be discovered by the usual perfunctory examination we make, and yet it is the dangerous one. Valvular disease, on the other hand, which one can hear, need be very little taken into account. It is one of the conditions under which the pulse, in the early stages of chloroform, seems always to get fuller and steadier. I have often pointed this out to students as an encouragement to them not to fear valvular disease. There is another condition which we are often not aware of, because we do not look out for it—viz., the presence of albumin or sugar in the urine. I suspect that I have perhaps been as guilty as anyone in this matter of not examining the patient's urine before operation in private cases. In hospital this is done for us—or ought to be done—as a matter of routine, and so we get warning. That a man with albuminous urine and diseased kidneys is a dangerous subject, especially for chloroform, cannot be doubted, and in his case effort should be made to do with the least possible amount of anæsthetic and, if possible, to manage by means of local anæsthesia.

As regards the safest position in which a patient can be placed who has to take an anæsthetic I think that there can be no doubt that the recumbent position on the left side is the safest. The upright position in a chair is certainly the worst and, among other things, has contributed to the many fatalities which have occurred during dental operations. On the other hand, I would be glad to know if any member of the society knows of a fatal case occurring during childbirth. This seems to be a very rare thing, and yet chloroform is constantly being given in such cases. No doubt the patients are mostly at the best and most vigorous period of life, and from their condition may be expected to be in good general health. Also no very deep anæsthesia is required. But I also think that there are two other factors in this immunity, firstly, the fact that the patient lies well round on the left side, and, secondly, the fact that this position is one in which the tongue naturally falls forward and does not impede the breathing.

CORONERS' INQUESTS.

If a patient dies during or immediately after an operation there is no coroner's inquest, although there might be one if the coroner chose. But the whole surgical profession would become impossible if their proceedings were to be at the mercy of a coroner and his learned jury, and so the coroner says nothing, but tacitly admits that the operation was done skilfully and in good faith and that death was not the surgeon's fault but the patient's misfortune. I do not see why a death from an anæsthetic should be treated on different grounds. Were the public needing to be protected from reckless treatment it would be a different matter, but to the surgeon and the anæsthetist, in whose practice a death occurs, nothing can be more heartrending and distressing. We are not anxious to cover up any weak points. We are anxious to reveal them to each other and to encourage each other by every means in our power to improve them away. Therefore, there is no need of coroners' inquiries to stimulate us in that direction. But on the other side it becomes a serious question whether it is for the good of the public that the details of deaths from anæsthetics should be inserted in the public newspapers at all. I notice, and every surgeon notices, that when an operation is proposed it is not the operation that is dreaded but the anæsthetic. After a death in this city I have noticed this dread among private patients become distressing. Now, a condition of mental depression and dread is the worst state in which a patient can be who has to be anæsthetised. As the findings of the coroner's court have never contributed in the smallest degree to helping us how to avert danger and as their publication is injurious to the public health I think that the British Medical Association might well bring power to bear upon coroners, so that if a death from an anæsthetic be reported to them they should treat it in the same way as a death from operation and dispense with a public inquiry, unless they have cause to believe that there has been neglect or that the anæsthetic has been given by an unqualified practitioner. I believe that coroners' inquiries have never in this matter saved a human life and have contributed to the deaths of many.

WHAT IS THE REMEDY?

I believe, then, that physiological research has not as yet contributed, and in the future is not likely to contribute, to a practical knowledge of the safest way to administer chloroform and ether. I am also of opinion that complicated instruments with valves and stopcocks are not required for their safe administration and that for the most part they cannot and will not be employed in general practice where something very simple is required. Finally, I agree with the report of the British Medical Association inquiry, which stated that, after all their elaborate investigations extending over years, they believed that the safe administration of anæsthetics depended upon the judgment and experience of the administrator. If this be so, how are the administrators of the future being taught? They are not being systematically taught at all. I know that there are schools where the students receive a certain amount of instruction in the giving of anæsthetics, our own being among the number. But it is not enough—sufficient importance is not attached to it. Consider what value is

attached to the teaching of the methods of performing tremendous operations on the abdomen and brain, most of which really save very few lives, and which not one man in 500 who learns about them will ever perform. What an amount of useless biology, anatomy, physiology, and materia medica is stuffed into the student, and simply consumes valuable slices of time out of his five years' curriculum. And yet here is the important subject of anæsthetics, which every student will in due time have to administer, practically passed over as a thing of little consequence, so that many a man gets a diploma who has never once given ether or chloroform. It is time that the schools began to take hold of this matter and to show a practical interest in it, so that the bodies which grant degrees and diplomas may eventually compel the teaching of anæsthetic administration as a necessary part of the student's education.

How is this to be carried out? As regards all hospitals I cannot say, but with regard to those connected with medical schools, I should think that there were very few which at the present day have not an anæsthetist attached to them, and he should be the man to teach the students, every one of whom should be certified by him as having given an anæsthetic to a certain number of persons under his supervision. And, the labourer being worthy of his hire, he should be entitled to a reasonable fee for this. I do not believe in the cry against increasing the expense of medical education. As regards mere fees paid to teachers these are of a most moderate and well-earned character. They amount to little more than half the sums demanded for admission into most of the important businesses and professions; so that my view is that the anæsthetist should do practical teaching in his own important branch and should be properly paid for so doing. I know well that this view has been very ably advanced in the medical press by certain men of eminence who have this subject at heart, and one of the objects of this little paper is, if possible, to give what help it may to their efforts.

ULCERATION OF THE ŒSOPHAGUS AND STOMACH DUE TO SWALLOWING STRONG HYDROCHLORIC ACID:

LESSONS OF TREATMENT DEDUCED FROM THREE CASES.[1]

BY C. B. KEETLEY, F.R.C.S. ENG.,
SURGEON TO THE WEST LONDON HOSPITAL.

THE main conclusion I draw from a study of these three cases is that in cases of poisoning by the more powerful corrosive acids surgical intervention should be almost immediate and that it is a mistake to postpone resort to surgery until there is no other alternative except that of letting the patient die from inanition. I will give the histories briefly and then discuss the question of treatment.

CASE 1. *Enormous dilatation of the stomach developed after accidental poisoning by strong hydrochloric acid; Loreta's operation; complete relief, apparently lasting; rapid recovery of flesh and strength.*—In the middle of October, 1897, I was asked by my colleague, Dr. J. B. Ball, to see a female patient of his, aged 32 years, who had eight months previously swallowed pure hydrochloric acid by mistake. It was the most striking case of dilatation of the stomach that I have ever seen and it is much to be regretted that no photograph was taken. When the patient stood up, whether she was viewed from the front or from the side, the whole anterior abdominal wall, except in the left iliac region and the extreme right of the right lumbar region, could be seen pushed forward by the stomach. She was very emaciated and the shape and movements of the organ could be seen with ease. There was a difficulty in swallowing and immediate vomiting, which, together with the history of corrosive acid poisoning, suggested either stricture or spasm of the œsophagus as well as of the pylorus. In fact, at this time it seemed almost equally difficult to get food into and out of the stomach.

On Oct. 18th an operation was performed. An incision was made in the middle line above the umbilicus. The stomach presented. The pylorus could be felt some inches away in the right iliac or lower part of the right lumbar region. No adhesions or signs of thickening of the stomach wall were found. The pyloric portion of the stomach was now "hauled" outside. The word "haul" gives a better idea of the length and size of the organ than would the usual word "pull." Protective gauze packing was employed. A one-and-a-half inch incision was made into the stomach. The pylorus was thickened and was so contracted that it would only just admit the closed blades of a pair of polypus forceps. Gradual dilatation was made, first with the forceps, next with the little finger, and lastly with a three-bladed rectal dilator. With the last the pyloric opening was stretched to a circumference of four and a half inches, and a slight sensation of tearing was felt. Closure of the opening and removal of the dilator were next effected and the stomach was washed out with hot water through the wound. The opening in the stomach and the wound in the abdominal wall were then sutured.

Improvement began at once and progressed rapidly. Indeed, as soon as the patient had fully recovered consciousness after the anæsthetic she felt well and complained of nothing afterwards but an inordinate appetite. Vomiting ceased and the patient rapidly put on flesh. A year afterwards she was in good health and strength. The stomach never quite returned to its normal size. Last year I heard that she had not been so well recently, but I did not learn what was the matter. She has left her former address and I cannot find her, so I cannot report on her present state. The patient was shown at a meeting of the West London Medico-Chirurgical Society in December, 1897. I cannot remember who was the medical friend who saw her last year; but if he sees this I hope he will communicate with me.

CASE 2. *Suicidal poisoning by strong hydrochloric acid; rapid development of bronchitis and obstruction to breathing; extreme weakness; abdominal incision, but the stomach not opened on account of sudden collapse; great temporary improvement for 10 days; death three days later; contraction of the pylorus and pneumonia.*—The patient, a man, aged 25 years, was readmitted into hospital on Oct. 19th, 1897, the day after the operation on the patient in Case 1. He had been first admitted under the care of Dr. Hood. 32 days before his first admission he had swallowed strong hydrochloric acid with suicidal intent. After passing 18 days in the hospital he was discharged. He had then no pains, there were no physical signs of illness, and he "could swallow thin foods and milk." Very shortly after leaving he began to lose flesh, found difficulty in swallowing even liquids, and at last "what food he did swallow was vomited." When he was readmitted there was a "constant feeling of sickness" and the patient was emaciated. There was no ulceration or cicatrisation of the mouth or the fauces. He could not swallow saliva. Attempts to pass œsophageal bougies caused much distress and induced vomiting. There were signs of pyloric obstruction. The greater curvature of the stomach descended an inch below the umbilicus. Palpation caused slight pain and excited spasmodic contraction. No thickening could be felt. The vomit for the most part was liquid and very dark brown. Constipation was present. On Oct. 21st rectal feeding was commenced. On the 28th when I saw the patient, as he had been getting more and more emaciated, I recommended operation. I noticed that he was then suffering from some bronchial or pneumonic affection with expectoration of copious blackish phlegm.

On Oct. 29th operation was proceeded with. I made an incision to the right of the middle line. The pylorus was exposed, but before further steps could be taken the patient became collapsed and blue. It was considered necessary to postpone opening the stomach. Iodoform gauze (wrung out in 1 in 2000 sublimate lotion) was placed in the wound so as to prepare for a future second stage of operation, without anæsthetic, in a day or two. A few ounces of neutral saline were injected subcutaneously into the axilla and 14 ounces of warm milk into the rectum. A urethral bougie was passed down the œsophagus. My intention, as may have been inferred, was to enlarge the pylorus without a general anæsthetic about 48 hours after the unfinished operation, but a curious change in the patient prevented me. "He was much better in the night and for the first time for eight days was able to take fluid by the mouth." For the next 10 days he took milk freely and improved in strength and spirits every day. But unfortunately on the eleventh day a good deal of pain was complained of in the right side. On the

[1] A paper read before the Royal Medical and Chirurgical Society on Nov. 12th, 1901.

thirteenth day the note is: "Better night. Kept expectorating dark-coloured phlegm. Very collapsed in morning. Very little pulse. Gradually sank and died." The temperature had ranged from 97° to 98·4° F., rising only one degree the day before death.

The only observations noted post mortem were pneumonia of the base of the lung, congestion, and possibly a stricture of the upper part of the œsophagus, thickening and a very tight stricture of the pylorus, and enormous distension of the stomach.

It is difficult to be sure of what occurred in this case after the incomplete operation. Possibly the passage of the urethral bougie down the œsophagus restored the power of swallowing, but as the pyloric stricture remained unrelieved less fluid passed out of than into the stomach, and so the gastric dilatation increased and the general condition became more dangerous. I was lulled into a false sense of security by the improvement in the patient's spirits and appearance. (The notes of the case were taken by Mr. J. M. Flavelle and Mr. A. Granville.)

CASE 3. *Suicidal poisoning by strong hydrochloric acid; stricture and progressive ulceration of the œsophagus and of the pyloric part of the stomach as well as of the pylorus; great emaciation and depression; gastro-enterostomy with Murphy's button; immediate relief and continued improvement for nearly six weeks, then death from bronchitis and pneumonia; Murphy's button found in the stomach, and the ulceration of the œsophagus unhealed.*—The patient, a female, aged 46 years, was admitted under the care of Dr. Hood on Sept. 13th, 1900. When under the influence of drink she had attempted suicide with strong hydrochloric acid. She had "spat out most of it." The mouth and the fauces were burnt by the acid. There were pain all down the throat and in the stomach and great thirst. An emetic and then bicarbonate of potash and calcined magnesia were administered. The pulse was 104 and of good volume and tension. For 10 days she had pain and the vomit occasionally contained blood. Compound mixture of bismuth with glycerine of carbolic acid (10 minims), was given internally, and chlorate of potash gargle. The mixture seemed to remove both the pain and the vomiting. Nutrient enemata were employed. On the eighteenth day (Sept. 30th) the mouth and lips had healed. On Oct. 1st milk was given by the mouth. On the 9th the nutrient enemata were stopped. The patient took more by the mouth; there was great hunger. Swallowing, unfortunately, became more and more difficult. Before the 27th (the forty-third day) scarcely even the smallest quantity of liquid could be swallowed. Emaciation and weakness were extreme. The nutrient enemata had been renewed on the 23rd.

On Oct. 27th operative measures were carried out. A median incision was made. The pylorus presented at once in the middle line, but could not be turned out owing to extensive and tough adhesions. The incision was prolonged up to the xiphoid. The left rectus and superjacent skin were cut through transversely. Extensive, strong adhesions of the stomach to the omentum, the abdominal wall, and the transverse colon were partly clamped and were all divided or separated. The stomach could then be moved. The pyloric portion was contracted to the shape of a small sausage; the cardiac end was smaller than natural and almost entirely under the left costal margin. An anterior gastro-jejunostomy with a Murphy's button was performed. The bowel and the stomach apertures were tightened round the halves of the buttons by two or three interrupted fine silk sero-muscular sutures. The contracted pyloric part of the stomach was three or four inches long. Its lumen would not admit the tip of the little finger—in fact, it seemed almost impervious. The parietal wound was closed in layers. There was no drain. The patient was very collapsed after the operation. The pulse in the evening was 176. The nutrient enemata were not retained. Milk and hot water (in equal parts) were therefore given by the mouth at once. Five ounces were given—one ounce every quarter of an hour. This was repeated in the evening; there was no vomiting. The patient's condition improved. On the 28th (the day after the operation) the pulse was 112. Liquid food was retained both by the stomach and by the rectum. On the 30th the patient was better still; the pulse was 90. She vomited altogether three times in the course of the first 10 days. On the tenth night she retched a great deal. There was no abdominal tenderness. Did the Murphy's button fall back into the stomach at this time and cause the retching? Feeding by the mouth was stopped for 24 hours and then was resumed cautiously with milk and "Valentine." There was no more vomiting. The wound healed. The patient increased in strength and cheerfulness. The temperature was normal till Nov. 20th (the twenty-fifth day after the operation), when it began to rise gradually, and on the twenty-nine day it reached 101·6° F.; it only once reached 102° (four-hourly chart). With the rising temperature was noticed a slight cough with mucous expectoration. There was no pain or tenderness in the epigastrium. Some pain over the base of the right lung continued and there were occasional paroxysms of pain in the "left iliac region." Was this caused by the button, which x rays had a week before shown to have probably fallen back into the stomach? There were râles on coughing, but there was no dulness at the right base. On the 24th the mucus was slightly rusty; the chest was tender when percussed. On the 29th the sputum was offensive, muco-purulent, and more copious. On Dec. 2nd (the thirty-ninth day after the operation) the patient could not swallow solid food. On the 4th the diarrhœa which had been present for the last three days still persisted. On the 5th the patient died from collapse.

The post-mortem examination showed a stricture two inches long, scarcely admitting a lead pencil, at the upper extremity of the œsophagus. At the cardiac end was a second stricture, less tight, but with ulceration still active. The Murphy's button was free in the cavity of the stomach. The ulceration had quite healed. The cicatrised and contracted pyloric end had further contracted longitudinally to about half its length at the date of the gastro-enterostomy (six weeks before). A narrow curved or sinuous passage led through it into the duodenum. The gastro-enterostomy was perfect with a free passage into the distal loop of the jejunum, and a narrower one into the proximal. The extensive adhesions observed at the operation had nearly all disappeared and nothing remained to interfere with free movements of the stomach. The large bronchi were ulcerated and contained foul purulent secretion. There was grey hepatisation of the left lung throughout. Some pneumonia was present at the base of the right lung. (The notes of the case were taken by Mr. Bennett and Mr. O. Inchley.)

REMARKS ON THE THREE CASES.

That which was least injured and non-suicidal recovered but passed through a period of illness which if left unrelieved must have had serious consequences. Both suicidal cases were much worse than Case 1 at the time of operation. Besides, in both cases the bronchial trouble began before operation. In Case 2 the following note was recorded the day after the acid was swallowed: "Large mucous râles all over chest, back and front." Two days later there is the note, "Respiration, especially at night, is very noisy and sounds as if it was obstructed." The note on the day of his discharge is, "Lungs practically clear"; it continues: "No sickness, no dysphagia, no," &c. Nevertheless, this patient had to be re-admitted in 14 days worse than ever. There is no note about his respiratory organs on re-admission, probably because attention was concentrated on his serious œsophageal and gastric troubles. The patients in Cases 2 and 3 did not suffer to anything like the same extent as did the patient in Case 1 from gastric dilatation; indeed, the third patient had a stomach much smaller than normal. But they were more seriously injured in the œsophagus. A careful post-mortem examination of that organ from Case 3 persuades me that its ulceration was still progressive rather than healing, although her death occurred 40 days after operation and 83 days after swallowing the corrosive acid. In both the fatal cases the patient died from septic broncho-pneumonia; I see no reason for attributing this to the operations. In Case 2 nothing was done but the making of a small incision in the abdominal wall. In Case 3 healing was rapid. A post-mortem examination showed the gastro-entero-tomy to be perfect, and not only was there no peritonitis but most of the adhesions seen at the operation, 40 days before, had been absorbed.

I believe the ulceration of the œsophagus or of the pharynx leads to the infection of the air-passages. This may occur directly through the lymphatics, or indirectly through the passage of muco-purulent discharge downwards through a glottis, perhaps itself œdematous or thickened, or otherwise impaired by the action of the acid, not necessarily on the glottis itself, but on parts closely adjacent to it.

At the same time the physical strength and the mental and moral state of such patients are lowered extremely by

both the causes and the results of the accident. The utmost conceivable depth of "lowness" is reached by a patient who, as a consequence of swallowing a corrosive acid suicidally, is for a long period neither able to pass food through the œsophagus nor chyme through the pylorus.

THE QUESTION OF TREATMENT.

These cases seem to me to teach certain lessons. Conclusions should be drawn cautiously from a short series of only three cases; but the rules which I am going to lay down are indicated by these cases, not only collectively, but individually. It is not, therefore, a mere matter of statistics.

1. The patient should receive no food (either liquid or solid) by the mouth for several weeks—i.e., he should not be fed by the mouth as soon as he can swallow with little or no pain; but oral feeding should be postponed until there is good reason to believe that the injuries have completely healed.

2. When the injuries are serious (and they generally are so) an operation should be performed within a few days of the date of the poisoning—the sooner the better.

It must always be a matter of conjecture to determine whether the injuries have healed or not. The only parts of the injured tract visible are the mouth and pharynx, but the pylorus or even the middle of the stomach may be much worse, as, e.g., in Case 3, not to mention the œsophagus. In Case 3 the mouth and lips are noted as having healed on the eighteenth day, but active ulceration of the gullet was found after death on the eighty-fourth day (three months after the accident).

I am afraid that it is rarely safe to assume that a case of this kind is not serious unless it is positively known that only a minute quantity of acid has been swallowed. Case 3 was scarcely a truly suicidal one. The patient got drunk on the "rent money," was scolded by her husband, drank the acid, but spat most of it out again; she was brought to the hospital and made to swallow calcined lime and an emetic, and yet her injuries were terrible. Even when swallowed by pure accident an ounce or more is easily taken into the gullet before the mistake is discovered and most of it passes into the stomach, running along the lesser curvature till it is stopped by the pylorus or by food already in the stomach.

All the three cases were treated according to what seems to be the usual practice—that is, the patients were allowed to swallow food when they could do it without much difficulty or pain. The patient in Case 2 was fed by the mouth from the very first day. The subject of Case 3 began with milk on the sixth day and took puddings on the fifteenth day. She never got as far as fish or meat. Granting that the patient should not be fed at all by the mouth for several weeks, and that we should only be satisfied with rectal feeding in trivial cases, the severe cases remain to raise the question of operative treatment.

The region most seriously injured is usually the pyloric part of the stomach. The problem for the surgeon's solution is not simple. The choice of operations apparently lies between gastrostomy, duodenostomy, jejunostomy, gastro-enterostomy, and a combination of gastrostomy with gastro-enterostomy. Gastrostomy does not give rest to the most injured part—namely, the pylorus. Gastro-enterostomy does not rest the œsophagus. Jejunostomy, when properly done, is practically a double operation. Duodenostomy would seem to be the simplest and most straightforward procedure, although it is liable to permit bile to leak out and irritate the skin. All these methods are open to the objection that, in the by no means unlikely event of an œsophageal or a pyloric contraction taking place after all, a secondary operation may have to be done, in addition to one for undoing the first operation. Therefore the indications would most likely be best met by combining a gastrostomy with a gastro-enterostomy, and carrying the gastrostomy tube through the gastro-enterostomy wound for some distance down the efferent loop of the jejunum. This is practically the method recommended by Witzel for an ordinary gastro-enterostomy, except that in the cases I am writing about something more is desirable—viz., an arrangement for washing out and draining the stomach through the gastrostomy wound. This could be obtained either by using a double tube, especially constructed so that the shorter canal opened into the stomach, or, more readily, by passing the long, narrow gastro-jejunal tube through a short, wide gastric tube. If in spite of treatment pyloric contraction should take place this plan provides a gastro-enterostomy ready made. The gastrostomy wound could be closed or kept open, according to the final condition of the œsophagus. In the hands of careful and experienced operators the method would probably be found very safe, as the patient would be operated on while in fair physical condition, and the gastro-jejunal tube should resist the dangers of the "vicious circle." These dangers could be further minimised by using Murphy's button, and, should that contrivance fall into the stomach, the gastrostomy wound itself could be enlarged to permit its extraction. Further, the treatment above recommended would reduce to a minimum the danger of infection of the air-passages, through the swallowing or the regurgitation of septic discharge, or of food, either of which might easily find its way through a glottis œdematous and stiffened either by direct injury or by injury to neighbouring parts. In a long series of cases of poisoning by corrosives now and then the glottis is likely to be so severely injured as to demand prompt tracheotomy. This would make it more than ever desirable not to feed by the mouth.

At the post-mortem examination of Case 3 I was struck by the resemblance of the ulcerated bronchi to those of a case in which bronchial infection and gangrene had been caused by a tracheo-œsophageal fistula.

AFTER-TREATMENT.

Feeding by the gastro-jejunal tube would be commenced at once, in spite even of moderate ether or chloroform vomiting, should those anæsthetics be used, but gas alone, or with oxygen, would suffice for the operation described, or even local anæsthesia. Local treatment should be given to (1) the mouth and nose, (2) the pharynx and the œsophagus, and (3) the stomach.

The mouth.—This should be frequently washed out with warm solution of chlorate of potash or warm boric lotion, or with both. Dirty teeth should be cleaned, diseased teeth should be treated with pure carbolic acid or by extraction, and suppurating alveoli should be attended to. If the process is very painful owing to the burning, gas, cocaine, or eucaine should be used. The nasal passages should be attended to if unhealthy; if healthy they should be left untouched.

The pharynx.—The pharynx is said not to be reached by gargles. It should be sprayed frequently with hot boric lotion, and twice a day it should be dusted with a little, not much, iodoform powder through a puff. As soon as the patient can swallow without pain he should be allowed hot water or hot neutral saline *ad lib.*, and be encouraged to take it.

The stomach.—The hot water swallowed should be allowed to escape by the short gastrostomy tube, so that it would tend to wash out the stomach also. In addition, after each meal given by the gastro-jejunal tube, the stomach should be washed out with hot water by the gastric tube.

The application in some such way as that above sketched of the principles of surgery to this distressing class of cases would, I believe, greatly reduce their mortality and lessen the permanent injury done to those who more or less recover.

Grosvenor-street, W.

NOTES OF A SEVERE AND LONG-STANDING CASE OF LUPUS TREATED BY THE APPLICATION OF THE X RAYS.

BY GEORGE H. RODMAN, M.D. DURH., M.R.C.S. ENG.

THE patient whose treatment is the subject of the following notes is a woman, aged about 38 years, who has suffered from lupus of the face, which is reported to have started after an operation for the removal of a diseased portion of the left malar bone some 20 years ago. There is a history of tuberculosis in the family, one sister having died from phthisis at the age of 14 years, and a brother also was the victim of laryngeal phthisis. The lupus had been scraped about 15 years ago; since then it has been treated medicinally and by the local application of ointments and lotions. At the time of starting the treatment by the x rays, on April 19th, 1901, when Fig. 1 and Fig. 2 were obtained, the disease was involving both sides of the face, the ulceration being continued under the chin. On the left side of the face the disease extended from the zygomatic

arch over the cheek and involved the lobe of the ear which was considerably eroded from lupoid ulceration. Anteriorly the disease extended to within half an inch of the angle of the mouth. The upper portion of this area was covered with dry brownish scabs, the lower half being smoother and less ulcerated. The edges of the disease were considerably raised and indurated. Below the jaw the disease consisted of a strip of about an inch in width extending from the ramus of one side to that of the other; the scabbing was chiefly about the edges. On the right side of the face the disease was slightly less extensive than on the left, but at the same time it caused frightful disfigurement and presented the features of typical lupus.

The x-ray treatment was commenced on April 19th, 1901, and between that date and July 29th, 1901, when it was stopped, there were 50 exposures made, of which details are given in the accompanying table. 14 were employed in

FIG. 1.

Showing the extent of the disease on the left side of the face on April 19th, 1901.

FIG. 2.

Showing the extent of the disease on the right side of the face on April 19th, 1901.

FIG. 3.

Showing the condition of the patient, left side, on Oct. 6th, 1901.

FIG. 4.

Showing the condition of the patient, right side, on Oct. 6th, 1901.

dealing with the left side on the first occasion. 17 were used to the right side, and on the second occasion of dealing with the left side there were 19 exposures made. On Sept. 13th, 1901, the healing process was complete with the exception of a small patch on the lobule of the left ear which it is my intention to expose again on some future occasion to the influence of the vacuum tube.

During the early sittings it will be noticed that the length of the exposures was shorter and the distance of the tube from the disease greater than that employed later—a course that should be invariably followed till the tolerance of the patient has been ascertained. Six applications were employed weekly during the period of active treatment.

The x rays were produced, as will be seen from the table, with a potential of about eleven and a half volts, and the ampèrage employed was between two and three ampères in the primary current.

The tube used was a Cox's record tube excited by a 10-inch coil with platinum break. The portions of the face and neck not affected by the disease and the scalp were protected from the influence of the rays by a paper pulp mask, the outer surface of which was covered with a layer of thick lead foil. No falling off of the hair of the head or the eyebrows was noticed. Fig. 3 and Fig. 4 were obtained on Oct. 6th, 1901. These, as well as those before treatment was commenced, are from unretouched negatives kindly taken for me by my friend Mr. Albert Cheese. In Fig. 3 the dark discolouration of the left cheek over the seat of lupus has been exaggerated in the photograph.

Table giving Particulars of a Case of Lupus treated by the X Rays.

Date.	Voltage employed.	Length of exposure.	Distance of tube from disease.	Date.	Voltage employed.	Length of exposure.	Distance of tube from disease.
		Mins.	Ins.			Mins.	Ins.
April 19th ...	11·10	10	6	June 16th ...	11·94	15	3
,, 21st ...	11·10	10	6	,, 17th ...	11·52	15	3
,, 22nd ...	11·10	12	6	,, 18th ...	11·52	15	3
,, 23rd ...	11·10	14	5	,, 19th ...	11·52	15	3
,, 25th ...	11·0	15	4	,, 20th ...	11·52	10	3
,, 26th ...	10·74	15	4	,, 21st ...	11·40	12	3
,, 28th ...	10·44	15	4	July 8th ...	11·51	15	3
,, 29th ...	11·88	15	5	,, 9th ...	11·50	15	3
,, 30th ...	11·64	15	4	,, 10th ...	10·74	18	3
May 1st ...	11·64	15	4	,, 11th ...	10·74	18	3
,, 2nd ...	11·40	15	4	,, 12th ...	10·26	18	3
,, 3rd ...	11·40	15	4	,, 14th ...	10·26	15	2½
,, 5th ...	11·40	10	6	,, 15th ...	11·94	18	2½
,, 6th ...	11·40	5	6	,, 16th ...	11·52	18	2½
June 3rd ...	11·40	18	4	,, 17th ...	11·52	18	2½
,, 4th ...	11·40	16	4	,, 18th ...	11·40	18	3
,, 5th ...	11·40	16	4	,, 19th ...	11·40	18	2½
,, 6th ...	11·40	15	4	,, 21st ...	11·40	15	2½
,, 7th ...	11·34	16	4	,, 22nd ...	11·40	18	2½
,, 9th ...	11·28	15	3½	,, 23rd ...	11·40	20	2½
,, 10th ...	11·04	18	3	,, 24th ...	11·40	20	2½
,, 11th ...	10·80	18	3	,, 25th ...	11·40	20	2½
,, 12th ...	10·80	15	3	,, 26th ...	11·40	20	2½
,, 13th ...	10·50	10	4	,, 28th ...	11·28	15	2½
,, 14th ...	10·46	15	3	,, 29th ...	11·28	12	3½

REMARKS.

April 19th.—The application of the x rays to the left side of the face was commenced.

April 28th.—The lobule of the ear was showing signs of irritation and was becoming raw from separation of scabs, consequently it was protected with lead-foil.

April 29th.—The whole surface of the left side of the face was becoming redder.

May 1st.—Discharging pus in several points.

May 5th.—The patient complained of the surface being very tender. The lupus nodules at the upper and front edge were suppurating. The whole area looked flatter and there was not nearly so much infiltration of the edges.

May 6th.—The surface was discharging pus freely and the crusts were separating; it was very tender and sore. The application of the x rays was discontinued.

May 11th.—The crusts had come away, leaving a clean, suppurating, raw, smooth surface resembling a burn in process of healing.

May 21st.—There was a white edge of healing ulceration round the raw surface. This edge varied in width from one-eighth to one-quarter of an inch. In several spots there were islands of white healing centres.

May 26th.—The healing process proceeded rapidly, the white edge increasing in width. There were some remains of tubercular nodules at the extreme front.

June 2nd.—Continued to heal rapidly.

June 3rd.—Treatment was started on the right side of the face.

June 5th.—No reaction was noticed.

June 6th.—There was commencing hyperæmia of the ulcerated surface.

June 10th.—The healing process on the left side continued to progress satisfactorily.

June 16th.—The patient complained of the right cheek becoming sore. The surface began to look glazed. The healing of the left side of the face had continued uninterruptedly, and there was now only a small patch of ulceration in the centre of the size of a threepenny-piece.

June 20th.—Tenderness was more marked and suppuration was commencing.

June 21st.—The crusts had separated and the surface was freely suppurating. The application of the x rays was stopped.

June 25th.—The surface of the right cheek resembled that of a healing burn, the whole of the lupoid tissue having suppurated.

July 6th.—The surface had continued to suppurate freely and was now healing with a typical white edge extending over a smooth red raw surface.

July 8th.—Treatment was reapplied to the left side of the face; a mask of lead-foil was applied over the parts cured and the rays were only allowed to invade the front edge of the scar, a patch over the zygoma, and the lobule of the ear.

July 12th.—The lobule of the ear was becoming slightly tender.

July 15th.—The ear was still tenderer, but at present there was no appearance of swelling of the lupoid edge on the cheek.

July 18th.—The ear was discharging freely, and consequently it was masked with lead foil.

July 22nd.—The ear was discharging freely; the edge of the scar on the cheek was becoming raised and tender.

July 25th.—Crusts were forming and becoming raised and the discharging ear continued very tender.

July 28th.—The crusts were commencing to separate.

July 29th.—The edge had become raw and suppurating. Application of the x rays was discontinued.

Sept. 13th.—The patient was completely healed.

East Sheen, S.W.

A CASE OF LUPUS VULGARIS TREATED BY EXPOSURE TO X RAYS.

BY T. COKE SQUANCE, M.D. DURH.,

PHYSICIAN AND PATHOLOGIST TO THE SUNDERLAND INFIRMARY; ORAL EXAMINER IN PUBLIC HEALTH IN THE UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

ON July 15th, 1900, I was consulted by a woman with regard to her daughter, aged 17 years, who had suffered from lupus vulgaris for upwards of two years, during which period she had been on two occasions treated by erasion but without any permanent benefit, the disease having returned with increased virulency. Fig. 1 gives a very good idea of the appearance of the patient. Her nose was very much thickened and the alæ were ulcerating. The upper lip was extremely swollen, measuring a little over an inch from the skin to the mucous membrane. The disease extended over both cheeks, affecting the lower lids of both eyes. There was a patch on the forehead (concealed by the hair) and a large one extending over the angle of the jaw on the right side. I advised, as other methods had failed, that exposure to the x rays should be tried. This was agreed to, and at first I gave the patient 10 minutes' exposure three times a week, protecting the eyes as far as possible but allowing the lower lids to be exposed. After the first exposure there was decided flushing, accompanied by some pain and tingling and a sensation of heat which continued more or less markedly after each sitting, the skin assuming a reddish-brown appearance with yellowish crusts. As soon as the installation of the x ray apparatus at the Sunderland Infirmary was effected she became an inmate of the infirmary, and the subsequent exposures to the rays were made by Mr. S. S. Larcombe (who had charge of the apparatus). For some time the exposures were made daily until the reaction became so marked that the treatment had to be intermitted, and the eyes also required attention, corneitis having supervened. Improvement was steady but slow until the condition shown in Fig. 2 was achieved, when the patient was practically cured, but as a precautionary measure occasional

exposures are still made. On account of the patch on the forehead no proper protection could be given to the hair which became considerably thinned.

The distance of the tube was varied from seven to three inches and the length of exposure from five to 15 minutes. It is somewhat difficult to account for the action of the rays

FIG. 1.

Condition of patient on July 15th, 1900.

FIG. 2.

Condition of patient on July 20th, 1901.

in lupus; probably it is a dual one, on the one hand by excessive stimulation of the bacilli, causing "over population" and consequent dearth of food, and on the other producing an inflammatory reaction in the healthy tissues on the margin of, and below, the diseased portion, causing them to put on an increased resistance.

Sunderland.

ROTATION OF THE FOREARM.[1]

BY RICHARD J. ANDERSON, M.D. R.U.I., M.R.C.S. ENG.,
PROFESSOR OF NATURAL HISTORY, MINERALOGY, AND GEOLOGY, QUEEN'S COLLEGE, GALWAY.

PROFESSOR HEIBERG of Christiania has called attention to the fact that the movements of supination and pronation are commonly attributed to the motions of the radius alone. He has shown that in addition to the movement of the lower end of the radius round the ulnar styloid process (the pit at the root of the styloid process) the ulna moves too; both bones near the wrist move along curves. Heiberg made his views clear by models and made experiments to confirm the results. His conclusions were embodied in a paper read before the Copenhagen International Medical Congress. The presumption that the humero-ulnar articulation does not admit of any movement except flexion and extension led to the suggestion that the humerus rotated and not the ulna. The movement of the ulna, however, took place after the humerus had been clamped. Then it was shown that the forced twisting of the hand was not necessary to establish the facts. Dr. Cathcart of Edinburgh showed by means of a ring that the ulna moved under the bracelet as clearly as the radius. A demonstration was given at a meeting of the British Medical Association. A frame with an upper and a lower clamp with an intermediate graduated circle was used to test the amount of rotation at any part of a limb for a given displacement at the distal end. The latter, being determined by means of a graduated circular scale, was read off and the corresponding number on the intermediate graduated circle was noted.[2] The degree of rotation was ascertained in the anterior limb of several animals. Rotation becomes less and less conspicuous as we proceed to examine the forearm nearer and nearer the elbow-joint, and in man a slight displacement of the bones indicates what remains of movement at the limit. The following method may be used to show the rotation of the arm. An elastic band with a buckle is attached to a mirror three quarters of an inch wide. This band is fixed over the lower end of the forearm with the mirror over the styloid process of the radius first and afterwards over the styloid process of the ulna. Except in extreme supination and pronation the mirror may be made to follow the rotating wrist. A beam from a lantern with reflector allowed to fall on the mirror will show the nature of the rotation. The band can be gradually moved upwards, and at each stage the rotation tested; where the mirror rests on a bone the tilt will render more conspicuous the movement. This contributes chiefly to produce the deviation of the reflected beam when the mirror is placed over the olecranon. The roll here, though slight, is felt by the mirror.

The intimate connexion between movements, ligaments, and articulations has long been established, indeed, since the time of the appearance of the works of Henle, Cruveilhier, and C. Krause. Leaving out all those articulations in which surfaces are difficult and in which the movements are correspondingly complex, there still remains an assortment of articular surfaces which anatomists have tried to group and classify, and to which nature has assigned certain varieties of ligaments and has associated certain movements. Inter-articular cartilages and ligaments render joints confusing, and it is only by referring to the conditions in the lower animal forms that one can hope to get an explanation of the odd conditions in man. The peculiarity of the hip-joint was only understood after comparative anatomical investigation (W. Krause). The condition of the ulna is only understood after referring to the development of the articulation and its condition in other animals. The fixed radial head in the sheep is seen to supplement the coronoid portion of the ulna in rendering more secure the elbow-joint; the elongated hollow of the articular head of the radius in the badger is intermediate in form, but the head of the radius in man is not strictly circular.

The joints in the forearm are somewhat varied. Leaving out the wrist-joint, the lower radio-ulnar articulation is made up of surfaces of the second order (hyperboloid). The same holds for the upper radio-ulnar joint. The articular hollow in the upper end of the radius is apparently a hollow sphere,

[1] A paper read before the British Medical Association, Surgery Section, on August 1st, 1901.

[2] Anatomische Anzeiger, 1892.

but in all probability rarely so simple, and it may be limited to a portion of the head, whilst a portion becomes flat or slightly convex. The convex articular surface of the humerus, limited to the anterior and lower part, passes internally into the ulnar articular surface. This capitular surface registers the imperfect attempt of nature to make a ball-and-socket joint. The easiest form of glass lens to make is, we are told, a spherical one, but the conditions are different where the surfaces are living. The ulna has really two humeral joints which were at one time separate in man, the interval being occupied by fibrous synovial processes; at birth there is a simple joint. The surfaces are hyperboloid running into spherical externally and paraboloid or ellipsoidal internally; the surface is sometimes called helicoid or screw surface.[3] The olecranon articulates above behind and below, the coronoid process in front and below. The surface is not a hyperboloid of one sheet as a straight wire does not lie in the surface. The hollow inner part of the coronoid articulation is greater than the hollow inner part of the olecranon (a well-known fact). The shapes of the bones which give us a key to form, as the joints give us a key to motions, are in their constitution influenced apparently by the part they take in bearing strains and by the vascular supply. It is not easy to say whether the lines of the trabeculæ in the cancellous tissue are chiefly the cause of the shapes of the articulations or are altogether the result of the intermittent pressure produced by the bones. The radiating fibres suggest a response to the lines of pressure.

The motions of the bones concerned in rotation of the forearm are that of the radius on the ulna, that of the ulna in relation to the radius, and that of each in relation to the humerus. The radius would describe a cone-like surface if the ulna were fixed and the head circular. The radius follows, however, the moving ulna as a satellite follows its planet. The ring of fibrous tissue above and the triangular fibro-cartilage below limit the movements. The apex of the cone alters its position owing to the head not being circular and the movement of flexion which the head experiences. The ulna in pronation is extended, abducted, and rotated. The radius is flexed and adducted as well as rotated; so far as the ulna is concerned, this act is aided by the movements of the ulna. The action is easier and a strain less necessary than if the ulna were fixed. The movements of the radius on the humerus are flexion or extension, a shifting inwards or outwards and rotation of the head. The ulna moves backwards or forwards on the trochlear surface, and rolls in or out; extension of the ulna is attended with motion of the lower end out. It may here be mentioned that the methods by which ellipsoidal, hyperboloidal, spherical, or paraboloidal curves are produced physically, suggest to one that similar conditions may prevail in the construction of similarly curved joints.

Rotation of the forearm is rarely a simple action. It is commonly associated with movements of flexion and extension of the elbow-joint. To this the character of the muscles in the forearm bears witness. There are apparently varying degrees of inter-association of these actions in animals. Leaving out the intrinsic muscles, one may easily gather from a study of the pronator teres how the association arises. This muscle draws the forearm towards the arm and at the same time turns the radius over the ulna. If two half-discs of cardboard be taken and so placed that the circumference of one will represent the course of the upper part of the humeral attachment of the teres as the humerus moves towards the forearm, whilst the other disc is so placed that its circumference will represent the course of the attached end of the teres in movements of the radius inwards, then, by attaching threads to each disc to represent the muscle band at each stage of movement a surface may be constructed. This surface is of a complex nature and illustrates the direction of the muscle band at any particular part of the excursion.[4] It may be urged that the articular surfaces show variations. Professor Lesshaft's classification is an attempt to deal with a subject which the addition of numerous facts has rendered difficult. Although complex for the student who wishes to have his attention riveted upon the shape, ligaments, lines of pressure, and connexions of joints, it will be regarded as a thankworthy attempt to deal with a great difficulty. It is now proved that the articular surfaces, formerly regarded as very simple, are more complex, but are still within the scope of the mathematician who deals only with the simpler relations. The more difficult surfaces and forms are appropriately referred to the artist who may give us a key to the complex conditions which nature presents.

Queen's College, Galway.

[3] Chomitzky, quoted by Lesshaft.

[4] Report of the meeting of the British Association at Southport.

ON A NEW METHOD OF PRESERVING MUSEUM SPECIMENS.

BY HUGH GALT, M.B., F.F.P.S. GLASG., D.P.H. CAMB.,
PATHOLOGIST TO THE GLASGOW SAMARITAN HOSPITAL FOR WOMEN; PROFESSOR OF FORENSIC MEDICINE AND PUBLIC HEALTH, ST. MUNGO'S COLLEGE, GLASGOW, ETC.

IT will be admitted by all who have had any considerable experience in the matter that the methods at present in use for preserving gross pathological specimens in such a way as to enable the latter to be employed as illustrations are very far from perfect in many respects, and that finality has been reached in this direction few will venture to assert. Until quite recent years the almost universal method of preservation was by keeping the specimens in a large relative bulk of spirit of wine, after preliminary washing with water and soaking in several changes of spirit of wine. This method, while satisfactory enough with regard to the prevention of decomposition and the retention of the structural relationship of the parts, had three serious defects. Firstly, it was costly, particularly where a large number of specimens had to be dealt with; moreover, the alcohol evaporated unless the jars were almost hermetically sealed and had to be replenished or even entirely renewed at intervals. Secondly, the final result of the alcohol was to cause considerable shrinkage of the specimen and thus greatly to destroy its illustrative value. This result, of course, is particularly evident in the case of succulent tissues or organs such as the liver, spleen, &c. Thirdly, the colour of the specimen in the fresh state, except in the case of pigment insoluble in alcohol or carbonaceous matter, was soon completely, or almost completely, lost, the tissues taking on a uniform yellowish white colour, so that, for example, a cancerous nodule in the kidney could not be distinguished by its colour from the surrounding renal tissue. This is, perhaps, the most serious objection. There is no scientific objection on the ground of cost, and as to the shrinkage of the specimen accurate original measurement will to some extent minimise this disadvantage; but no minute description of the original colours (in the absence of colour-photography or the costly and often unfaithful painting in colours) can overcome the last defect.

On the properties of formaldehyde as a preservative of decomposable organic tissues partly depends a more recent method of preserving museum specimens, although the final preservative fluid chiefly employed in conjunction with formaldehyde is essentially diluted glycerine. For some time it was thought that in a solution of formaldehyde in water, containing about 40 per cent. of the gas and commercially known as formalin, we had a liquid which would be free from the disadvantages attaching to alcohol as a preservative. As it prevents decomposition even when very largely diluted with water the first objection to alcohol is surmounted, for the cost of a solution of formalin sufficiently strong to prevent the decomposition of animal tissues is comparatively trifling. With regard to the second objection, however, there is little if any gain, as even in a very dilute solution formalin not only causes shrinking of the tissues, but hardens them and renders them brittle. On the third objection there is again little real gain, for while formalin does not bleach the natural colours like alcohol, it gradually approximates the various shades until the specimen becomes ultimately of a slate colour. All the foregoing applies equally to formaldehyde vapour. In addition, formalin has inherent objections. Its vapour is irritating to the air-passages; it acts deleteriously on the hands; being volatile it slowly evaporates; while it is occasionally unstable even in diluted solution.

Perhaps the best-known modification in the employment of formalin in the preservation of specimens is Kaiserling's. Here the tissue is really only fixed in a solution of formaldehyde with acetate and nitrate of potassium; after treatment with 80 per cent. and 95 per cent. alcohol the

specimen is finally preserved in a 20 per cent. aqueous dilution of glycerine with 10 per cent. acetate of potassium added. While I am informed that in some hands this method has given very fair results, personally I have to express my dissatisfaction with it. Acting strictly according to the instructions given the final results were very uneven, and in no single case could I get a specimen to retain for a length of time anything like its appearance in the fresh state, while the necessity of keeping the specimens thus treated carefully covered from the light must always remain a very real objection. It is evident, for instance, that specimens preserved by Kaiserling's method may require to be frequently uncovered and exposed to the light when being utilised for demonstration, so that in a longer or shorter time the natural colours entirely disappear. A museum of specimens preserved by Kaiserling's method would be on the same level as a picture gallery with the pictures facing the wall. Moreover, there are certain specimens (uterine fibroids and dermoid cysts for example) in which the colour of the specimen in the fresh state is so nearly and uniformly white that no advantage attaches to Kaiserling's or any other method requiring special treatment for the retention of colour. On the other hand, it is certainly advisable that as far as possible museum specimens should be prepared and preserved by a single method.

The foregoing facts led me some three years ago to institute a series of experiments with various substances with the view of finding whether a satisfactory method of preserving museum specimens could not be devised which would be free from the objections applicable on the one hand to alcohol and on the other to formaldehyde and its modifications. It will be at once apparent that I had a fairly large field to draw upon. A number of possible agents were neglected on account of initial cost, instability, poisonous properties, or for some other reason; but, as the following list will show, I had still ample ground in which to search for a substitute or substitutes, partial or complete, for alcohol and formaldehyde. I made in all between 70 and 80 experiments with the following agents, singly or in combination: alcohol, chloroform, formalin, glycerine, arsenic, carbolic acid, sodium chloride, potassium acetate, potassium nitrate, and chloral hydrate.

Without going into the details of the separate groups of experiments I may say that the first positive result was found in an aqueous solution containing 15 per cent. of glycerine and 0·1 per cent. of arsenic. This solution, after the usual preliminary treatment of the specimen by washing with water and fixing in 80 per cent. alcohol for from one to four days is cheaper than alcohol; it shrinks the tissue very slightly and the natural colours are fairly well retained, though somewhat dulled. The main objections are that the method is still somewhat costly (roughly the fluid costs 1*s.* 6*d.* per gallon) and that a greyish sediment is for many months gradually deposited on the glass of the jar and on the specimen itself. Not for some little time did it occur to me that possibly a watery solution of certain salts might suffice. Once the idea did present itself I assiduously experimented with the four compounds at the end of the foregoing list. It was early evident that so far as the mere preservation of a specimen was concerned a very simple saline solution was all that was necessary; but in order to avoid shrinkage and persistent oozing of tissue fluids with consequent discolouration of the menstruum, and to conserve as far as possible the natural colours, certain combinations and preliminary treatment were necessary. This, then, was the crux of the whole question, and only after numerous experiments and long waiting was I able to assure myself that the method which I finally fixed upon was as free from objection as possible. Before describing the actual method I may say that in my opinion it is almost certainly impossible to preserve specimens for an unlimited time in such a way as to retain their natural colours in the fresh state, and that at most we can only hope to retain the natural colouring to such an extent as will show differences of colour corresponding in kind to the differences evident in the fresh specimen.

Apart from preliminary treatment, the liquid which I have employed during the last two years for preserving museum specimens at the Glasgow Samaritan Hospital for Women is composed as follows: common salt, five ounces; potassium nitrate, one ounce; chloral hydrate, one ounce; water, 100 ounces. The above solution answers all the objections previously stated. 1. The cost is about 4*d.* per gallon, as compared with 2*s.* 6*d.* for 80 per cent. alcohol (methylated spirit) and 1*s.* 6*d.* for the final preservative liquid in Kaiserling's method. The cost of the preliminary treatment is the same as in the old method and much less than in Kaiserling's, as 95 per cent. alcohol is not required. 2. The shrinkage of specimens is distinctly less than in Kaiserling's method, and much less than in the old method. What little shrinkage is present is due to the necessary preliminary treatment. 3. Retention of colour is after all the chief point, and, as my specimens show, this has been retained in a very high degree and without the troublesome after-treatment which is necessary in Kaiserling's method.

The preliminary treatment is the same as in the old method. As the preservative liquid has little or no coaguliant powers the specimen if put into it without preliminary treatment would remain too soft and by tension and compression distort the original relations and measurements. After trimming, if necessary, and washing in running water for several hours, the specimens are put into a large excess of methylated spirit for from six hours to as many days, according to the size and nature of the specimen, changing the spirit once or twice should there be much oozing of tissue fluids. In the case of large or soft specimens the addition of 0·5 per cent. of formalin accelerates the "setting" of the tissues. From this the specimen is transferred direct to the preservative liquid, in which it occasionally floats for a short time until it is sufficiently permeated. In some cases, after a few weeks it may be necessary to renew the liquid; beyond this it is only necessary to replenish the jar with water to make up for that gradually lost by evaporation. Loss of water may of course be prevented by sealing the cover of the jar, but this interferes with the abstraction of the specimen for detailed examination, and as the cost of the water is *nil* there is no advantage in sealing the jar.

It only remains to enumerate the advantages of this method over any of the older ones. 1. The item of cost is important. So long as the results are even only equal to those of the other methods the cost should decide the adoption of one method in preference to another. Further, this method enables men in private practice to preserve many interesting specimens at a small cost, which would otherwise be lost. Even in hospitals it is clear that, *ceteris paribus*, the cheapest method should be employed. 2. It is at least as simple to begin with as the old method, and requires less after-attention; it is simpler at all stages than Kaiserling's method. 3. As regards the action of light, specimens thus preserved do not require to be kept in the dark; they are unaffected even by strong sunlight. 4. The preservation of colour is more nearly complete than in the older methods. 5. It has the advantage of portability. The solid ingredients can be carried any distance, and the liquid prepared as required. 6. As it is non-volatile in character jars require to be replenished with water only if the solution remains clear. 7. Its non-poisonous and non-irritating properties. 8. Its action on the cellular elements of the tissues is negative, enabling microscopical sections to be made after long intervals. In the older methods microscopical sections made after the lapse of more than a year or two stain diffusely. 9. Shrinking of the specimen is very slight, as indicated by actual measurements.

Little need be said with regard to the several ingredients of the liquid except in a general manner. It is well known that common salt itself only acts as a permanent preservative in the form of strong brine. The addition of a small proportion of chloral hydrate greatly reduces the proportion of common salt necessary and adds to the efficiency of the liquid as a preservative. As far as the retention of colour is concerned the potassium nitrate is indispensable. In an emergency a specimen may be put temporarily into the preservative liquid direct, but the result in this case is that the specimen tends to become uniformly stained or coloured by diffusion, while the liquid part of the fat (if there is any present) collects on the surface. Rarely, also, a fungoid growth may form on the surface, necessitating renewal of the liquid. The specimen must at some time be subjected to the "preliminary treatment" if the proportions observed in the fresh state are to be retained.

Glasgow.

HOSPITAL SUNDAY AT BATH.—The offertories at many of the churches in Bath on Nov. 3rd were devoted to the funds of the Royal United Hospital, the sum of £224 being collected.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RETENTION OF URINE FROM THE PRESENCE OF A BOTTLE IN THE RECTUM.

BY JOHN GOOD, M.R.C.S. ENG., L.S.A.

ONE evening in January, 1895, a soldier brought me a message to visit his father, aged 74 years, a club patient living three miles distant in the country, as he was "in great pain and could not pass water." I rode out and catheterised, finding no obstruction or difficulty in passing a No. 10 gum-elastic catheter. The old man was in bed. I advised hot applications and told him to send me word next morning if he was unable to micturate. Next morning the soldier reappeared; his father was again in agony and again was as readily relieved. The preceding evening I had been informed that his bowels were acting well; this morning I learned that he had diarrhœa and that the stools were bloody, so I made a rectal examination and felt a firm, hard, smooth, round body that I could not recognise or learn anything about from the patient. The idea of its being a foreign body did not then occur to me. Accordingly I wrote to my partners in the adjacent town, stating my difficulty and asking for a consultation next day. The following morning I again catheterised and worried my patient into confessing that he had put a bottle there to "plug the opening" as his diarrhœa had troubled him so much, and "it had slipped in." My fingers were not long enough to grasp the convexity of the bottle, nor could I drag it forward from off the coccyx, where it was tightly lodged with its neck tilted upwards and forwards towards the base of the bladder, but by looping the gum-elastic catheter I had just used I was able to raise the bottle sufficiently off the coccyx to pass the loop beneath it and up around the body of the bottle, then with a hard pull I dragged it forward and it simply "shot out" of the bowel. The bottle contained only a little bloody mucus, and was long-necked and cylindrical, as used for Worcester sauce, but I regret that I did not take its dimensions. On its removal all urinary and bowel troubles ceased. This case is, I believe, unique in retention of urine being produced mechanically through the casual presence of a foreign body in the rectum.

Stockport.

CURIOUS SYMPTOMS AFTER EXTRACTION OF A TOOTH.

BY W. COLLIER PRIDHAM, L.D.S. ENG.

I HAVE just seen an article by Dr. A. Stanley Green which appeared in THE LANCET of August 10th, p. 372, and I should like to be allowed to report a similar case, which, however, differed from Dr. Green's in that the patient under my care had taken no anæsthetic, though showing the same symptoms as those described.

My patient was a man, aged 30 years, who applied at the Royal Dental Hospital of London to have a fractured tooth removed. The fracture had been done a week previously, and in the interval the man had suffered extreme pain. The roots of the first lower molar on the left side were removed without difficulty, the patient, however, immediately subsequently to the operation complaining of great pain. This was almost immediately relieved by the application of hot water to the gums, and at this point the patient appeared to be quite well. Within five minutes of the extraction he complained of severe "pins and needles" in the legs and arms, became rigid and quite cold, with a bad colour, hurried respirations, dilated pupils, strong contraction of the muscles of the arm and forearm, flexure of the fingers, and considerable adduction of the thumbs. The teeth were clenched, but the patient was able to answer questions with some difficulty, and he remained conscious during the whole attack which lasted for about half an hour. The hands and arms were well chafed and doses of sal volatile were administered. As in Dr. Green's case, the patient was eager to be allowed to sit up, at least partially. The symptoms yielded to continued efforts to restore warmth, and the man recovered slowly till he was able to warm himself by swinging his arms about. He eventually left the hospital apparently little the worse for the attack.

Highbury New Park, N.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF DOUBLE OVARIAN CYST COMPLICATED BY SUPPURATIVE CALCULOUS CHOLECYSTITIS.

(Under the care of Mr. H. W. ALLINGHAM.)

THE co-existence of gall-stones with some other abdominal lesion is by no means rare, and the explanation given below by Mr. Keyser is probably true—namely, that the flow of bile is interfered with, thus predisposing to the formation of calculi. A further cause may be found in the fact that an abdominal tumour of any great size will tend to cause constipation, and thus favour intestinal decomposition, with the result that micro-organisms are more likely to make their way up the bile-ducts. For the notes of the case we are indebted to Mr. Charles R. Keyser, surgical registrar.

A woman, aged 64 years, was admitted into St. George's Hospital on Sept. 9th, 1901, under the care of Mr. H. W. Allingham, with a history that for three months she had noticed pain and swelling in the right side of the abdomen which had lately increased in size. The pain was gradually becoming worse; a fortnight before she had an attack of diarrhœa and sickness which, however, only lasted for a day. Since then there had been no vomiting and the bowels had acted daily. On admission she looked thin and ill and her temperature was 100° F. The tongue was coated. Examination of the abdomen showed that the right lower half was distended and occupied by a soft fluctuating tumour, the upper border of which almost touched the level of the umbilicus and was well defined, whereas the lower edge could not be felt. There was some tenderness over the right side of the tumour and a thrill could easily be obtained on palpation. It was noticed that in the lowest part of the cyst on the right side there was a small, rounded, hard mass to be felt. Per vaginam a large soft mass could be felt on both sides of the pelvis which was continuous with the abdominal tumour; fluctuation was easily obtained from one side of the pelvis to the other and also from the tumour as felt per abdomen to the mass in the pelvis.

On Sept. 16th, an anæsthetic having been given, Mr. Allingham opened the abdomen in the middle line below the umbilicus and found a large multilocular, left ovarian cyst which projected over on to the right side. Owing to the size of the cyst it was tapped *in situ* and a good deal of clear, straw-coloured fluid was evacuated. The cyst was then brought to the surface, the pedicle ligatured with strong silk by means of the Staffordshire knot, and the tumour removed. It was then found that there was a right ovarian cyst of the size of a clenched fist, and this was removed in a similar manner. There were very few adhesions present. Before closing the wound a tumour was felt close under the liver and an incision was made over the mass just to the right of the middle line after suturing the lower wound. The swelling was due to a distended gall-bladder which was opened and about two ounces of pus were evacuated. Three facetted gall-stones were also seen and removed. The gall-bladder was sutured to the skin at the lower part of the wound, the upper part being closed, and iodoform gauze lightly packed into the gall-bladder. The patient was a good deal collapsed after the operation, but

soon rallied when strychnine and brandy had been injected subcutaneously and an enema of normal saline solution had been given. The temperature, which for the first three days had been slightly raised at night, became normal and except for temporary retention of urine, which necessitated the use of a catheter, the patient made an uneventful recovery, and left the hospital on Oct. 12th, both wounds being practically healed.

Remarks by Mr. KEYSER.—The chief interest in this case lies in the fact that in spite of her age and in the severity of the operation the patient made an uneventful recovery; also that the pathological condition which in all probability made her seek medical advice was not the enlargement of the ovarian cysts but the suppurative cholecystitis, the existence of which was not even thought of either by the patient or the surgeon until the abdomen was actually opened. The pain and temperature had been considered due probably to a twisted pedicle of the ovarian cyst. As this was not the case some other cause of the symptoms was immediately sought for. This shows, therefore, that a surgeon ought not to be content with treating any obvious disease only, but also to make sure, as far as possible, that there is no other lesion which might account for the symptoms. Personally I have no doubt that the temperature and the pain were in this case caused by the trouble in the gall-bladder and not by the ovarian cysts. The manner in which gall-stones are formed and suppuration takes place is also of interest. Probably the sequence of events is as follows. The presence of the ovarian cysts (in this case), by preventing free peristalsis of the intestines, caused a stagnation of bile in the gall-bladder; this diminished the power of resistance of the walls of the gall-bladder by lowering its vitality and allowed the entrance of the bacillus coli communis; this latter, together with the partial stagnation of the bile, was then followed by precipitation of cholesterin and the formation of the calculi. The original cause of the trouble—i.e., the pressure of the ovarian cysts—still continuing, and probably increasing, allowed the micro-organisms to enter the gall-bladder in larger numbers, and suppuration was the result. There has always been some difficulty in deciding why in some cases micro-organisms cause the formation of gall-stones and in others acute suppurative cholecystitis, and the reason has been ascribed by some to virulence of the bacteria; a mild attack being followed by the formation of calculi, whereas suppurative cholecystitis is the result of a large dose of the virus. This theory seems to be borne out by the case related above. I am much indebted to Mr. Allingham for permission to publish this case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Ulceration of the Œsophagus and Stomach due to Swallowing Strong Hydrochloric Acid: Lessons of Treatment Deduced from Three Cases.

A MEETING of this society was held on Nov. 12th, Mr. WARRINGTON HAWARD, the Treasurer, in the absence of the President, being in the chair.

Mr. C. B. KEETLEY read a paper upon Ulceration of the Œsophagus and Stomach due to Swallowing Strong Hydrochloric Acid:- Lessons of Treatment Deduced from Three Cases, which is published in full at p. 1328 of the present issue of THE LANCET.

Mr. E. P. PATON mentioned the case of a woman who had been under his care suffering from the effects of acid poisoning. He at first treated the case by the passage of a tube and washing out the stomach, and the patient for the first few days improved considerably. The stomach, however, became distended and very tense, but not dilated, and it could be felt in the abdomen as a hard ball of about the size of a fœtal head. This distension was attributed to obstruction both at the pylorus and at the cardiac end of the œsophagus. The abdomen was opened, an incision was made into the stomach, and a finger was passed through the pylorus into the duodenum. The duodenum was, however, so ulcerated that it gave way and a pyloroplastic operation had to be performed; the patient, however, died a few days later. At the necropsy it was found that there was only one small portion of healthy mucous membrane lining the stomach. Mr. Paton regretted that he had not performed a gastro-enterostomy, as he thought that that would have given the patient the best chance.

Mr. CLINTON DENT was of the opinion that in a large proportion of the cases the injury was at the pyloric end of the stomach. He said that pyloroplasty was to be preferred to Loreta's operation as it was possible in that way to obtain a good view of the mucous membrane of the stomach and duodenum and to estimate the extent of the mischief. He did not consider that a Murphy's button was a satisfactory arrangement and he advocated either Senn's plates or stitching. He thought it best to feed the patient as soon after the operation as possible and said that the food should be given hot.

Mr. HAWARD said that the œsophagus was seldom constricted by the effects of poison, and that often when swallowing was difficult a fair-sized bougie could be passed into the stomach, showing that the constriction was of a spasmodic nature. He was in favour of the plastic operation on the pylorus, and then if there was any difficulty, such, for instance, as the ulceration of the duodenum, a gastro-enterostomy could be performed. He preferred to use Senn's plates rather than Murphy's button, and he did not think that any contraction was likely to occur around the gastro-enterestomy opening when it was sewn up with a continuous suture. He was of the opinion that it was extremely important to feed the patients as soon after the operation as possible. He had never had cause to regret feeding a patient too soon after operation, but he had had cause to regret not having done so earlier in certain cases.

Mr. KEETLEY, in reply, said that the case which Mr. Paton had related was only another example of the necessity for early operation. He thought that Loreta's operation was to be preferred and was certainly safer than pyloroplasty or gastro-enterostomy. He was in favour of using a Murphy's button, as that seemed to prevent the "vicious circle"—i.e., the passage of the contents of the stomach into the duodenum and then through the gastro-enterostomy wound into the stomach again. Even if the Murphy's button fell back into the cavity it could easily be removed through the stomach, and the operation was attended by very little risk.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Nov. 11th, Dr. W. H. ALLCHIN, the President, being in the chair.

Mr. T. H. KELLOCK showed a case of Symmetrical Disease of the Ankle-joints in a child, aged three years and four months. There was a history of tuberculosis on the mother's side and the father had had rheumatism in both knees two months ago. There was no history of gout or syphilis. There was one other healthy child. The swelling of the ankles was first noticed a year previously, the one ankle being affected a little while before the other. Four months ago the skin became ulcerated over both ankles. When the patient was admitted to the hospital the ankle-joints were enlarged and pulpy, without pain or tenderness. There were several superficial ulcers round both, discharging a little pus; these had almost entirely healed under simple treatment. There was a fusiform swelling on the back of the carpus of the left hand. This, too, was neither painful nor tender. There was no enlargement of glands with the exception of some in the left groin, probably caused by a small abrasion in the knee. The spleen could just be felt. No signs of tubercle were present in the lungs or other viscera. The temperature was normal and the child's general health appeared to be good. The case was probably one of osteo-arthritis.—Mr. J. HUTCHINSON, jun., suggested that the case was a tuberculous affection of the joints and said that he had seen several cases in children with multiple tuberculous affection of the joints which recovered completely.—Mr. KELLOCK replied that had the ulceration been tuberculous it would hardly have healed up so rapidly under the most simple treatment.

Mr. M. S. MONIER-WILLIAMS showed a case of Ulcerative Colitis with Paralysis of the Eleventh and Twelfth Cranial Nerves in a man, aged 56 years, who had enjoyed good health until May, 1897, when diarrhœa and hæmorrhage commenced from no apparent cause. The motions were

excessively offensive, semi-fluid in character, and containing, besides blood and mucus, occasionally a very little pus. There was no pain except a griping pain when passing motions, which varied in number from five to 15 in 24 hours. There was no rise of temperature nor was there vomiting. The examination of the abdomen and the rectum revealed nothing abnormal. A course of mercury and iodide of potassium had little or no effect. Rectal irrigations with a solution of nitrate of silver (10 grains to the pint) and of a saturated solution of boric acid held the complaint in check for a time and a course of sulphur waters at Llandrindod Wells and also at Harrogate benefited the patient for a little, but on the whole he got steadily worse until December, 1900, when he was excessively ill. He had from 10 to 20 hæmorrhagic stools daily. There were extreme emaciation and loss of control of the sphincter ani. Dr. Hale White in consultation agreed that right-sided colotomy offered the best chance of saving the patient's life, and Mr. George Turner did the inguinal operation. As soon as the wound was healed and the artificial anus was ultimately fitted with the plug, now exhibited, he rapidly improved. He recovered control over the sphincter ani and was able to follow his ordinary life without inconvenience. On Jan. 4th, 1899, the same patient suddenly became quite hoarse in his voice, felt a little sick, but not otherwise ill, and noticed that his tongue on protrusion went to the right side. On examination the right vocal cord was found to be paralysed, the tongue was deflected to the right side, and the right side of the palate was partially paralysed. It was considered probable that there was a vascular lesion, probably thrombotic, affecting the nuclei of the hypoglossal and spinal accessory nerves on the right side. The patient had an apical systolic cardiac murmur. Subsequently the upper part of the right trapezius muscle showed signs of wasting and there was now complete wasting of the right side of the tongue. The patient recovered his voice, but the right vocal cord remained much as before, the left coming over to meet it.—Mr. GEORGE TURNER said that the colotomy had been performed in order to allow of more efficient local treatment being carried out. He suggested that the symptoms might have been due to thrombosis of the mesenteric vessels and a somewhat similar case had been published by Sir W. Gull.—The PRESIDENT suggested that considering that the patient had an affection of the mitral valve it seemed more probable that the paralysis of the cranial nerves was due to an embolus rather than to thrombosis.—Dr. R. L. BOWLES pointed out the relation which these cases bore to the nervous system and quoted a case in which after several months recovery took place.—Mr. L. A. BIDWELL suggested that an anastomosis between the ileum and the sigmoid would be the right means to treat these cases of ulcerative colitis, as that would place the affected part out of circuit.—Dr. HALE WHITE thought that the short-circuiting of the gut would be the most satisfactory treatment if one could be certain that there was no ulceration of the sigmoid or rectum.

Mr. W. H. BATTLE showed a Boy who Broke his Left Thigh in April of this year. The thigh was put up in plaster-of-Paris; this was removed at the end of three weeks on account of excessive swelling of the thigh, which was said to have been three times the size of the other one. Since that time the femur had united and now the patient was able to walk about. The swelling was said to be diminishing in size. The left femur was changed into a fusiform bony swelling measuring 15 inches, twice the size of the left. There was no pain and the child appeared to be in good health and got about. There was no softening and no enlarged glands could be felt.—Mr. GEORGE TURNER suggested that the case was one of exaggerated callus and mentioned a similar case in an adult in which it eventually entirely cleared up.—Mr. BATTLE, in reply, said that he thought the diagnosis lay between sarcoma, excessive callus, and excessive extravasation of blood owing to a scurvy condition. He had never seen such excessive callus in a child but had in an adult suffering from locomotor ataxia.

Mr. H. L. BARNARD showed two cases of Snap-thumb, one in an adult on whom he had operated, the patient being perfectly cured, and the other in an infant, one and a half years old.

Mr. A. PEARCE GOULD showed a case of Actinomycosis of the Breast in a girl, aged 19 years. She had enjoyed good health until the end of August, 1901, when she complained of pain of a stabbing character in the left mammary region. Five weeks later she noticed that the left breast was more prominent than the right. This increased until her admission into the Middlesex Hospital on Oct. 29th. The breast was then considerably and uniformly enlarged, fluctuating throughout, but neither painful nor tender. The skin over it was not discoloured. An incision was made and several ounces of green, slimy, offensive pus escaped. There was imperfect resonance and other evidence of thickening of the pleura. In the pus the mycelium of actinomycosis was found. All the hitherto recorded cases of actinomycosis of the chest-wall, including the mamma, had been secondary to disease of the lungs, pleura, and liver, and this was no exception to that rule. But the case was interesting because of the very slight evidence of the pulmonary disease and the rather unusual character of the abscess.—Dr. A. F. VOELCKER suggested that the primary disease was in the pleura and that the breast was secondarily involved. He mentioned the case of a boy who had died from this disease in whom numerous nodules of recent actinomycosis had been found in the skin and old foci in the pleura and liver.—Dr. E. MARKHAM SKERRITT (Bristol) mentioned a case in which there was evidence of actinomycosis of the lung, later there was evidence of involvement of the liver from which the patient died, and at the necropsy the only evidence of involvement of the lung was a track of scar tissue.—Mr. PEARCE GOULD said that there was probably more than one form of streptothrix giving rise to the condition known as actinomycosis.

Mr. A. CARLESS showed a case of Amputation of the Whole Upper Extremity for Chondro-sarcoma in a woman, aged 54 years. For three or four years previously she had complained of pain in the muscles of the right shoulder and had been treated for muscular rheumatism. Ten months previously she had noticed a hard swelling below the right clavicle; the pain increased and became shooting in character, extending down to the finger and keeping her awake at night. Two months before she was seen by Dr. Soltau Fenwick at the London Temperance Hospital and an operation was advised. When first seen at King's College Hospital a swelling only existed below the right clavicle in the region of the coracoid process. An x-ray examination gave no definite result. When admitted the sub-clavicular swelling was large and another softer one had developed below the outer portion of the scapular spine. An indefinite mass could be detected in the right axilla, and on inspection the whole contour of the shoulder was altered, suggesting a growth of the scapula, enveloping the head of the humerus which could be felt to be normal in size and position. The movements of the shoulder were limited, especially abduction and rotation, and some crepitus was noticeable in the joint. The muscles of the right arm were atrophied. There was no œdema of the arm and the radial pulses were equal on the two sides. No glands could be felt either in the axilla or in the supra-clavicular fossa. The whole extremity was removed by Berger's method. The patient left the hospital after three weeks with the wound completely healed. The growth proved to be a chondro-sarcoma.

Mr. J. LYNN THOMAS showed the photograph of a case of Occipital Meningocele. The patient was a child, aged four months, who had had a tumour at the back of the head since birth which had been getting gradually larger; it was attached to the skull by a pedicle over the posterior fontanelle and was of the shape of a very large fœtal head. It was translucent and fluctuating and had been tapped several times, and it had a number of large veins visible upon its surface when the skin was thin. The child had never been able to move its head on account of the enormous size of the meningocele. Operation was performed on Sept. 24th, 1901. Skin flaps were dissected off the meningocele, leaving the numerous veins untouched. A pair of strong occlusion forceps, six inches long, were then applied to the pedicle and gradually closed, whilst the meningocele was tapped. The pedicle was rendered water-tight by means of a Gely's suture and two rows of continuous sutures. The skin flaps were brought together and collodium dressings were applied. The recovery was uneventful.

Mr. W. H. BATTLE showed a case of Closure of Artificial Anus after Operation for Chronic Obstruction. The patient was a man, aged 49 years. He had been in good health until Jan. 1st, 1899, when he felt pain in the lower part of the abdomen, with constipation. About 14 days later he had offensive vomiting and diarrhœa, mucus was passed by the bowel, and he lost flesh. An exploratory incision was made in the median line below the umbilicus. The large

intestine was found to be thickened and distended. The upper part of the sigmoid flexure was fixed to the pelvic brim. Below this point a lump could be felt, thought to be malignant growth. There was some adhesion of the small intestine to the swelling. The incision was closed and a left inguinal colotomy was performed. A month later he was discharged, wearing a colotomy belt. On June 3rd, 1899, he had some return of the symptoms and the abdomen was reopened in the median line. The growth was found to be smaller than at the previous operation, but still fixed to the pelvic brim. On April 17th, 1901, he was re-admitted. Up to Christmas, 1899, he discharged fæces only by the colotomy opening, but about then he began to pass fæces per rectum. The first time he had severe pain in so doing, the pain lasting two hours. Since then fæces had passed both ways. He had greatly improved in health. The abdomen was opened in the median line through the old scar, but no growth or intestinal obstruction was found. On May 30th the colotomy opening was closed and the patient was discharged on the fortieth day with the wounds almost healed.

CLINICAL SOCIETY OF LONDON.

The Operative Treatment of Cancer of the Pyloric Portion of the Stomach.

A MEETING of this society was held on Nov. 8th, Mr. HOWARD MARSH, the President, being in the chair.

Mr. B. G. A. MOYNIHAN read a paper on the Operative Treatment of Cancer of the Pyloric Portion of the Stomach. He said that an examination into the records of cases of recurrence of malignant disease of the stomach after operation showed that the return of the growth was almost always local, in the stomach wall at or near the line of section, or in the glands or lymphatic vessels which drained the affected area. It had been estimated by Hemmeter that recurrence occurred in 99 per cent. of cases submitted to operation. In order to perform an operation which should prevent recurrence they must base such operation upon a knowledge (*a*) of the mode of invasion of the stomach by the primary growth, and (*b*) of the lymphatic distribution in the stomach and of the position of the glands into which the vessels drained. The researches of Borrmann and Guneo had shown that the most common point of origin of carcinoma in the stomach was 2·4 centimetres from the pylorus, on or near the lesser curvature. From that point the disease spread gradually, but more rapidly and to a greater extent towards the body of the stomach than towards the duodenum. On the stomach side the growth was not equal in all directions; there was a pronounced tendency for the induration to spread towards the curvatures. Towards the duodenum the spreading was slower and invariably less extensive. If sections were made at the edge of a malignant neoplasm it would be found that the edge of induration corresponded to the limit of growth in the mucosa. In the submucosa the growth extended much further in a solid unbroken mass, and beyond the edge of this mass isolated nodular deposits of growth were present, which became smaller as the distance from the tumour increased. The subserous and serous coats were implicated approximately to the same extent as the mucosa. The lymphatic glands of the stomach were situated chiefly along the vessels. 1. The coronary group lay along the lesser curvature. These glands were continuous at the origin of the coronary artery with those along the upper border of the pancreas. 2. The hepatic group lay along the hepatic artery and some of its members along the pyloric artery. The glands of the greater curvature lay along the right gastro-epiploic artery. At the pylorus they were numerous and close together and passed behind the stomach to the head of the pancreas. The lymphatic vessels draining into these glands passed very obliquely in the walls of the stomach. Three chief lymphatic areas of the stomach might be described. An area along the lesser curvature, an area along the greater curvature, and an area comprising the greater tuberosity of the stomach extending up to the œsophagus and on the greater curvature as far as the limit of supply of the left gastro-epiploic artery (as far as the gastro-splenic omentum). In cases of malignant disease of the pyloric portion of the stomach the growth extended in the direction of the curvatures and the glands of the first two groups were affected, but the glands of the third group and the area which they drained escaped. This latter area might be looked upon as an area apart, as one into which extension very rarely occurred, and as one, therefore, the lymphatic vessels and glands of which remained healthy. The term "isolated area" might well be employed to describe it. Upon the following facts an operation should be based: (1) malignant disease of the stomach most often commenced near the pylorus, just below the lesser curvature; (2) from its point of origin it spread most widely in the submucosa and chiefly towards the cardiac end of the stomach; (3) on the duodenal side it spread tardily and never extensively; (4) the drift of the growth was towards the curvatures; (5) the lymphatics draining the affected area passed to glands lying along the coronary and pyloric arteries above and the right gastro-epiploic and gastro-duodenal arteries below; and (6) the greater tuberosity of the stomach (the "isolated area") was very rarely involved. In order to ensure complete removal of the primary growth of the infiltrated lymphatic vessels and of the glands into which those vessels drained, it would be necessary to remove the stomach as far up on the lesser curvature as the point of abutment of the coronary artery, and on the greater curvature as far as the gastro-splenic omentum, and to remove the first portion of the duodenum. In order to make the operation simpler and quicker, a preliminary ligature of the coronary, the pyloric, the gastro-duodenal, and the left gastro-epiploic arteries was performed. After removal of this portion of the stomach, the anastomosis between the "isolated area" and the small intestine might be made by end-to-end approximation by Kocher's method or by suture of the cut ends and the performance of a separate gastro-enterostomy. The coronary artery was ligatured first, and it was to be found in the "ligament of Huschke," the falx coronaria, the folds of which inclosed it. The position of the artery could be defined by lifting up the liver and pulling the stomach downwards and outwards until a ridge was raised up in the peritoneum by the underlying vessel. The pyloric and gastro-duodenal arteries were best ligatured as they left the hepatic artery. The hepatic artery could be found just above the pylorus and could be made clearer by dragging the pylorus downwards and to the right.

Dr. P. H. PYE-SMITH said that Mr. Moynihan had called attention to the fact that that portion of the stomach which was situated below and to the left of the cardiac orifice was much less liable to be affected by carcinoma than was the pyloric end. This portion of the stomach was anatomically distinct from the rest of the stomach, being lined with epithelium of a different type from that which lined the rest of the stomach. He pointed out that the lesser curvature of the stomach was very much more frequently affected than the larger. The greatest difficulty in dealing with these cases surgically was the fact that an early diagnosis could seldom be made and long before any mass could be felt in the abdomen the disease had made such progress that it was impossible for the surgeon to remove the growth. He considered that in cases of pyloric obstruction with dilatation of the stomach it was better to short-circuit the intestine, which relieved the most acute symptoms due to the dilatation and allowed the patient to recover his general health before the more severe operation of pylorectomy was performed. He mentioned the case of a woman with an annular stricture of the colon in which colotomy was performed and the immediate symptoms were relieved: the patient was extremely collapsed after the operation, and he felt certain that had the severer operation of removing the annular stricture, which was very localised, been attempted at the time it would have been attended by a fatal result. The patient rapidly improved in her general health and a few weeks afterwards the stricture was removed, and five years later the patient was in good general health.

Dr. NORMAN MOORE said that it was most unusual for growth to spread from the pyloric end of the stomach into the duodenum. During nine years in which he had performed many necropsies he had never seen a single case in which the growth had extended from the stomach to the duodenum, although he had seen growths protrude through the pylorus into the duodenum but never involving the wall of the duodenum. He doubted whether the area of the stomach described by Mr. Moynihan as the "isolated area" was so rarely affected with new growth as he had made out. Out of 30 cases of carcinoma of the stomach in 11 the whole of the stomach wall was involved from the pylorus to the cardiac end, though he quite agreed that the cardiac end

was very much less liable to be affected than the pyloric end. He considered that when the stomach was involved by new growth it was generally in the form of one of the four following varieties: in the first variety the growth was confined to the pylorus and owing to the obstruction gave rise to enormous dilatation; in the second, which was commoner, the growth infiltrated the gastric wall to a greater or lesser extent along both curvatures, involving sometimes the whole stomach and even spreading to the œsophagus; in the third the growth involved the cardiac end of the stomach, and in this situation was always loose and very vascular so that hæmorrhage was liable to occur from it; and in the fourth the growth began in an old ulcer and this was commonly situated on the posterior wall of the stomach. Of secondary growths the most common situation was undoubtedly the liver; out of 30 cases it had been present in the organ in no less than 14. Next to the liver it was most usual to find the growth on the under surface of the diaphragm, and next in frequency in the lumbar glands. With regard to the duration of the disease he had known one case in which it had lasted for 60 months and in another it had lasted for 38 months. In most cases, however, the patients died within 18 months of the first symptoms. He thought that if the disease had lasted for seven months it was probable that secondary deposits would be found in other organs.

Mr. CHARTERS J. SYMONDS said that these cases were very disappointing so far as a cure was concerned; out of about 20 cases there was only one in which he felt justified in performing the operation of pylorectomy. In this case no tumour could be detected on examination. The growth was so limited that it seemed possible to remove it completely; when, however, further examination was made it was found impossible to remove the whole disease owing to the invasion of the posterior wall. He thought that a gastro-enterostomy would give as much relief as a pylorectomy, and it was not attended with the danger of the latter operation. He had seen cases which had extended over 12 months in which there were no secondary growths in the liver.

Mr. A. E. BARKER said the whole question turned upon the early diagnosis of the disease. He did not think, however, that the patients in whom the pylorus had been removed lived any longer than did those in whom a gastro-enterostomy had been performed. He referred to a case reported by Kocher in which the patient had lived nine years after the removal of the pylorus; he thought that such a favourable result might depend upon the nature of the growth and be similar to the case recorded by Dr. Norman Moore, in which the patient had lived 60 months. He referred to the great risk in exploring the abdomen in cases of carcinoma as compared to the risk in cases of non-malignant affections of the abdomen.

Dr. S. H. HABERSHON divided the cases into two classes—the first in which there were complete obstruction of the pylorus and dilatation of the stomach and the second in which the wall of the stomach was involved. These cases usually gave rise to symptoms of gastric irritation. No tumour could as a rule be detected in the abdomen in these cases. In one case which owing to the small size of the tumour seemed suitable for operation the patient died soon after its removal. The greatest difficulty in these cases was to distinguish gastric catarrh or simple ulceration from invasion of the stomach by new growths.

Mr. C. A. BALLANCE said that Mr. Moynihan had indicated the lines on which true advance in this branch of surgery would take place. He had always regarded carcinoma as a local infection and if the cases could only be diagnosed early enough there was hope of a permanent cure. He mentioned a case in which, owing to the growth not being felt, operation had been postponed for some months, and had the operation been performed when the patient was first seen the chances of a cure would have been far better.

Mr. G. H. MAKINS said that he should be interested to see the results of further cases operated on in the manner suggested by Mr. Moynihan. He mentioned the case of a young woman from whom he removed the pylorus as the growth seemed so limited. About seven months later the patient died from recurrent growths along the pancreas. He was of opinion that had he short-circuited the intestine the patient would have lived as long. He would certainly recommend short-circuiting rather than removal of the pylorus in most cases.

MR. MOYNIHAN, in reply, pointed out that in 70 per cent. of the cases the growth was in a part of the stomach which admitted of its removal. With respect to diagnosis he said that with a patient under medical treatment for gastric trouble at an age when one might expect to meet with cancer of the stomach, and when there was an absence of free hydrochloric acid in the stomach contents, then, whatever the physical signs and clinical condition might be, it was his practice to advise an exploratory incision. This had permitted him to obtain cases at an earlier date than elsewhere. Even in the early stage, however, the radical operation might not be permissible, because the disease might already have got beyond the limits of successful removal. He joined issue with Mr. Barker in respect of his view that life after gastro-enterostomy was at all comparable with life after partial gastrotomy or pylorectomy. Statistics showed at least one year's clear gain in favour of the latter. The improvement after gastro-enterostomy was great and immediate, but was quite ephemeral. He suggested that the attitude of surgeons towards these operations was their attitude of some years since towards operation for cancer of the breast. Gradually they had extended the limits of that operation, and no doubt as their knowledge increased they would do the same in regard to operations for cancer of the stomach. He believed that if attacked early by an operation on the lines he had described, they might hope in the future to obtain far better results than had been the case hitherto.

OBSTETRICAL SOCIETY OF LONDON.

Sloughing Fibroid of the Left Uterine Cornu showing Abnormal Relations.—Gonorrhœal Pelvic Peritonitis.—Tubal Mole.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 6th, Dr. PETER HORROCKS, the President, being in the chair.

Mr. ALBAN DORAN and Dr. CUTHBERT LOCKYER, communicated a paper on Sloughing Fibroid of the Left Uterine Cornu showing Abnormal Relations. The patient from whom the fibroid was removed, a single woman, aged 30 years, had been subject for a month to symptoms of pelvic inflammation with fever. There was an irregular moveable mass in the left fornix, rising into the left iliac fossa, and connected with a small anteflexed uterus. Mr. Doran performed supra-vaginal hysterectomy, removing the uterus and tumour with the left appendages; the right tube and ovary were spared. The patient recovered. The tumour, five inches in long diameter, was much larger than the uterus, projecting outwards rather than upwards from that organ. It was a true fibro-myoma in a necrotic condition, and adhered to the intestine and the omentum at its blunt-pointed outer extremity. This degenerative change apparently accounted for the febrile symptoms. At first sight the tumour simulated a fibroid in an undeveloped uterine cornu, but the Fallopian tube and ovarian ligament arose posteriorly, and not externally, and were attached to a deep groove between the uterus and the tumour. The left round ligament arose from the under surface of the tumour somewhat posteriorly, passing under it and forwards to the inguinal canal. A tumour with somewhat similar relations to a uterus much smaller than itself had recently been figured without any clinical history by Doederlein in Küstner's "Kurzes Lehrbuch der Gynäkologie" (Fig. 146). This outward growth of a fibroid of the cornu without outward displacement of the corresponding tube and ovary was very unusual. The sloughy state of the tumour demanded its removal, and the uterus could not possibly be separated from a growth of this kind, so that it was also removed.—After some remarks by the PRESIDENT, Dr. A. H. N. LEWERS said that among other points of interest the case described in the paper had an important bearing on the question of the mortality to be expected in cases of fibroid tumours of the uterus. Statistics had been published according to which the mortality from fibroids apart from operation appeared to be 0·000138 per cent., or about 3 in 2,000,000 cases. Now in such a case as Mr. Doran's, one of sloughing subperitoneal fibroid, which had already set up symptoms of pelvic inflammation with fever, it could not be doubted that apart from operation the case must have ended fatally. Leaving out of the question the other possible causes of death in cases of fibroids, was sloughing such a very rare thing? He had himself seen two cases comparatively recently. One had been already published. The other was one of the last cases in which he had removed the

appendages for uterine fibroid. In that case tying the vessels in the pedicles appeared to have in some way cut off the vascular supply of a fibroid near the fundus and caused it to slough. At all events, no evidence of sloughing (fever, fœtid discharge, &c.) was present till after the operation. The patient died within a week, and at the post-mortem examination one of the fibroids near the fundus was found to have sloughed. Dr. Lewers called attention to the frequency with which mucoid degeneration was met with in fibroids, and he would be glad to know Mr. Doran's views as to the relation, if any, between mucoid degeneration and sloughing.—After Dr. G. F. BLACKER had joined in the discussion Dr. CUTHBERT LOCKYER drew attention to the fact that the term "suppurating fibroid" hardly conveyed the correct idea of the condition of the tumour at the time of removal, inasmuch as suppuration implied the presence of pus and of pyogenic organisms, and such were not present in the tumour. In reply to a question by Dr. Blacker as to the causation of the febrile condition of the patient Dr. Lockyer thought that it was possible for a pyrexic state to result from the absorption of necrotic products in which no organisms could be found, and mentioned that this had been proved in the case of blood clot.—Mr. ALBAN DORAN, in reply, regretted that none of the Fellows of the society could offer any explanation of the abnormal relations. The tumour was certainly in the left cornu, and the displacement of the left round ligament was very unusual and seemed to indicate some malformation of the cornu. The term "sloughing" had been used for convenience in the title of this communication, though there was not the typical moist, fœtid gangrene seen in Dr. Lewers's case, where the tumour was in close relation with the uterine cavity. In the present case the tumour and the cavity were far apart. The necrotic change probably came on because the shape of the tumour made its blood-supply liable to interruption. He believed that mucoid degeneration arose from similar causes assisted by feeble circulation. This seemed certainly the case in two instances of uterine fibroid in his own practice where menorrhagia was severe and the tumour caused pain, rare in fibroid disease. Mr. Doran removed the uterus without the ovaries with great benefit to the patients.

Mr. J. BLAND-SUTTON read a communication on a case of Gonorrhœal Pelvic Peritonitis.—Dr. DRUMMOND ROBINSON made some observations with regard to the case.

Dr. W. S. HANDLEY read a communication on a case of Tubal Mole with Encysted Hæmatocele.—The case was discussed by Mr. DORAN, Dr. HERBERT SPENCER, Dr. W. S. A. GRIFFITH, Dr. LEWERS, Mr. BLAND-SUTTON, and Dr. LOCKYER.

The following specimens were shown:—

The PRESIDENT: Drawings of a case of Deciduoma Malignum.

Mr. DORAN: Fibroid of the Broad Ligament associated with an Ovarian Cyst.

Dr. LEWERS: Carcinomatous Uterus with Pyometra; the patient was well six years after the vaginal hysterectomy.

Dr. A. L. GALABIN: Papillomatous Cyst of (?) an Accessory Ovary.

Dr. T. W. EDEN: Cyclops Arrhynchus.

Dr. W. W. H. TATE: Fibro-myoma of the Uterus complicated with Double Salpingitis and Carcinoma of the Cervix removed by Vagino-Abdominal Hysterectomy.

The specimens were discussed by the PRESIDENT, Dr. GRIFFITH, Dr. LEWERS, Dr. LOCKYER, Dr. SPENCER, and Mr. J. H. TARGETT.

OPHTHALMOLOGICAL SOCIETY.

Mooren's Ulcer.—Keratitis in the Newly-born.—Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on Nov. 8th, Dr. DAVID LITTLE, the President, being in the chair.

Mr. E. NETTLESHIP read a paper on Chronic Serpiginous Ulcer of the Cornea (Mooren's Ulcer). The terms "chronic serpiginous ulcer," or "Mooren's ulcer," were preferable to "ulcus rodens," which was another name for rodent epithelioma. The paper was based upon an examination of 71 cases, 12 of which were Mr. Nettleship's. Bowman was the first to describe a case in detail (1849), but Mooren rightly had the credit of discovering the disease as a clinically distinct species in 1867. The ordinary characters and course of the disease were described. Its usual duration was from four to 12 months, and no cases were included that lasted less than two months, though certain cases running a less chronic course might perhaps be of the same nature. The subjects were adults from 23 to 71 years of age, rather less than a quarter were under 40 years of age, just half between 40 and 60 years, and rather more than a quarter over 60 years. A decided majority were males. In a large majority the attack in both sexes began in the winter half of the year, and degenerative changes, perhaps merely senile, lowered surface temperature, and perhaps some congenital defect of quality of the corneal tissue in certain persons were suggested as predisposing causes. The course of the disease strongly suggested infection, but no special micro-organism had as yet been found. In more than one-fourth of the cases both eyes suffered, sometimes with an interval of years, and the disease was often exactly symmetrical in the two eyes. The prognosis was always grave and was far worse when both eyes were attacked, only one in four of the double cases being arrested short of total leucoma; whilst of the single cases more than half recovered with some untouched cornea. The deeper parts of the eye remained healthy and vision was determined by the final state of the cornea and pupil. Treatment should begin with cutting away the overhanging and half-dead edge of the ulcer and applying an escharotic or strong germicide to the advancing border thus exposed; the galvano-cautery was the best, pure carbolic acid and strong tincture of iodine probably came next; transplantation of conjunctiva over the ulcer appeared useful occasionally. Though some cases were published as cured which would probably relapse, and though others went to universal leucoma in spite of all possible treatment, the results had been much better since the introduction of the cautery than before. Several old patients had done well and several young ones very badly. Allusion was made to the "marginal atrophy" of cornea recently described by Fuchs and to several other allied conditions of the cornea.—Mr. TREACHER COLLINS asked if there was any relation between the age of the patient and the rate of progress of the disease. In two cases which he had seen the ulceration of the cornea was most extensive, and yet the remaining opacity was not dense and remarkable good vision remained. In one case the patient developed a crop of vesicles on the cornea and some patches of infiltration, all of which cleared up upon his performing paracentesis and iridectomy.—Mr. J. B. LAWFORD related the case of a woman, aged 69 years, with no very definite specific history. In the right eye more than half the cornea was attacked; there was severe iritis, but not much pain, the temperature being normal. He cauterised the advancing edge and after a second application it healed. Shortly afterwards it broke out again and he then applied nitric acid without much good resulting. He then used solution of iodine daily, but it caused pain and did not do much good. Then the left eye became congested. An ulcer developed which he burnt with the cautery. The right eye had no unattacked cornea and it was vascular and cicatrised. The left was again cauterised and strong glycerine of perchloride of mercury was applied. After freely cutting away the edge and applying the galvano-cautery it healed, but again broke down and was cauterised. This was repeated and the patient still remained under treatment. In another case, that of a man, aged 46 years, healing was obtained after one application of the galvano-cautery.—Mr. W. LANG on one occasion after failure with the cautery did an iridectomy, when the ulcer healed and the case did well. Since then he had treated others in the same way with good results in all but one case.—Dr. A. BRONNER thought that there were two distinct classes of cases, one in which the ulceration was superficial and one in which it was deep.—Mr. SYDNEY STEPHENSON had published a case which occurred in a woman, aged 60 years, where the ulcer healed after two applications of the cautery. He then looked upon it as malignant, but this view he did not now hold. This disease seemed to occur about once in 17,000 cases, though more cases appeared to occur in some countries than in others. He thought the name Mooren's ulcer was a better term than serpiginous. Gifford had published a case in which the conjunctiva and sclera were involved in the ulcerative process, and last year an Italian observer isolated a bacillus which caused a disease when inoculated into the conjunctiva of rabbits.—The PRESIDENT stated that he had only seen a few cases, and he described one which occurred in a woman in which he advised an iridectomy, as it had when he first saw it resisted all kinds of treatment. The patient refused to have the

operation done and he subsequently transplanted a corneal flap with good result. The disease followed influenza.—Mr. R. E. BICKERTON asked if there was evidence of dacryocystitis in Mr. Nettleship's cases.—Mr. NETTLESHIP replied that lacrymal sac trouble was very uncommon in these cases. With regard to age and prognosis he had not worked it out, but he did not think that there was anything striking in this respect. He had never noticed vesicles on the cornea, neither had he found that the inhabitants of some countries were more liable to the disease than others. The cases cited by Mr. Lawford and the President certainly made the prognosis look bad, but he was sure that it was much better since the introduction of the cautery.

Dr. W. ERNEST THOMSON (Glasgow) read a paper on Keratitis in the Newly-born occurring after instrumental delivery and resulting in each case in an almost identical rare form of opacity. All the mothers had contracted pelves, and in the case of one with a conjugate of only two and three-quarter inches the delivery had been extremely difficult. Dr. Thomson saw two of these children very soon after birth, at which time three corneæ out of the four presented opacities in the anterior corneal layers with dulling of the surface but no vascularity. There was in all some bruising of the lids and conjunctivæ. The subsequent result was peculiar, for while one cornea became progressively more infiltrated, and that uniformly, the other two quickly improved; but the opacities, instead of remaining as central nebulæ, developed into white central vertical linear scars, with an adjacent area of much fainter haze. The third case had come under the care of Dr. Andrew Wilson at the fifth week. All signs of active keratitis had passed away, but an obliquely placed linear scar remained precisely similar in character to those in the other children. Dr. Wilson suggested that the cornea became buckled by the pressure of the forceps squeezing the eye against the nasal wall of the orbit. Dr. Thomson pointed out that such cases if seen late might be diagnosed as congenital corneal opacity of intra-uterine origin.

The following cases and card specimens were shown:—

Mr. A. HUGH THOMPSON: Sections of an Orbital Tumour (? Endothelioma, ? Adeno-sarcoma).

Mr. R. W. DOYNE: Tumour growing apparently from the Optic Disc.

Mr. ADAMS FROST showed some Eye Instruments used by Native Oculists in India which had been presented to the society by Major E. F. Drake-Brockman.

Mr. N. M. MACLEHOSE: Rodent Ulcer of the Upper Eyelid.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Motor Localisation in the Lumbo-sacral Region of the Spinal Cord.

THE first meeting of the eighty-first session of this society was held on Nov. 6th, Dr. A. G. MILLER, the President, being in the chair.

Dr. G. H. MELVILLE DUNLOP showed a rare case of Chloroma in a boy, aged three and a half years. Lympho-sarcomata usually originated in the periosteum of the cranium and the majority grew from the orbit. When such tumours were newly removed from the body they were of a bright green colour ("green cancer"). The boy was markedly anæmic, his eyeballs were so prominent that the lids could not be closed, and the palate was encroached on by growths of a purplish colour.

Dr. NORMAN WALKER showed (1) three cases of Lupus to illustrate the effects of light treatment; and (2) a Finsen Lamp. Usually five applications were sufficient to produce a cure.

Mr. H. J. STILES showed (1) a girl, aged seven years, after operation for Plexiform Angioma of the Scalp; (2) a child, aged one year and nine months, with Unilateral Congenital Dislocation of the Hip; and (3) a child after operation for Tuberculous Disease of the Frontal Bone.

Various specimens were shown by Dr. ALEXIS THOMSON, Mr. STILES, and Dr. HARVEY LITTLEJOHN.

Dr. ALEXANDER BRUCE read a paper on the Motor Locali-sation in the Lumbo-sacral Region of the Spinal Cord. He had recently had the opportunity of making definite observations on two cases, which had shown that the motor-cells had a definite arrangement in each segment of the cord, so that one could determine by knowing the arrangement and grouping of the cells to which segment it belonged. Nissl had shown that where a nerve-fibre had been cut or its muscle removed the corresponding nerve-cell underwent a constant "reaction at a distance" (Marinesco). The ordinary motor nerve-cell in the anterior cornu possessed dendritic processes and its granules were arranged in a more or less "tigroid" manner. When, however, the nerve-fibre had been cut and its distal part kept from uniting the nucleus of the motor cell wandered out from the centre and projected on the surface of the cell which lost its angles and appeared somewhat rounded; the body of the cell at the same time lost its characteristic appearance and within two weeks or so the protoplasm became finely granular. Such a method of observation allowed one to determine easily what the motor cells were which belonged to a particular muscle. There were three main groups of motor cells in the lumbo-sacral region of the cord—namely, (1) an antero-lateral group; (2) a postero-lateral or main group; and (3) a post-postero-lateral group which appeared earliest in the first sacral segment. All these nerve-groups were devoted to the muscles of the lower limb. There was also a fourth group—namely, a central or mesial group of cells situated close to the inner angle. It extended from the second lumbar to the second sacral segment and was very pronounced at the third and fourth lumbar segments. The antero-lateral group appeared at the second lumbar segment as a small group and gradually grew in size until it became a large group (with indications of further subdivision). It rapidly diminished in the first and second sacral segments, below which it could not be traced. The postero-lateral group extended from the second lumbar to the lower limit of the third sacral segment. The post-postero-lateral group extended from the first to the lower limit of the third sacral segment. In one case which Dr. Bruce had examined amputation of the leg above the knee had been performed. Here the calf muscles and the extrinsic and intrinsic muscles of the foot had been removed. On examining the cord the degeneration of cells (as shown by the Nissl reaction) commenced in the postero-lateral group below the fourth lumbar segment, as also in the post-postero-lateral groups (most marked in the first sacral segment). The antero-lateral, central, and mesial groups remained intact. The maximum reaction recurred at the first sacral segment, at which level the postero-lateral group was very large and where the post-postero-lateral group began to appear. Van Gehuchten and Nelis had described a case of amputation at the ankle where the reaction in the cells was limited to the post-postero-lateral group. If that be further confirmed then the post-postero-lateral column might be regarded as the centre for the intrinsic muscles of the foot, and the postero-lateral group from the fifth lumbar to the upper part of the third sacral segment inclusive as the centre for the muscles of the leg. The centres for the muscles below the knee must therefore be those in groups of nerve-cells situated between the upper limit of the fifth lumbar segment and the third sacral segment. In cases where the foot alone had been removed the small post-postero-lateral group of cells had undergone degeneration and demonstrated that that must be the centre for the muscles of the foot. In a second case a most extensive operation for tuberculous disease of the hip-joint and ilium was performed. The whole of the lower limb, acetabulum, and ilium and spines of the ischium were removed. The psoas, iliacus, pectineus, obturator internus, gemelli, and pyriformis muscles were alone left and the pudic nerve received injury during a subsequent operation. One expected, therefore, that the only motor-cells in the lumbo-sacral region left intact would be those corresponding to the above-named muscles. On examination it was found that the area of degeneration was much more extensive than in the preceding case and that the whole of the cell-columns (with certain exceptions) were affected in the lumbo-sacral region. Degenerated cells began to appear as high up as the second lumbar segment, some cells in the posterior part of the antero-lateral group being affected. In the lower half of this segment the number of degenerating cells increased in the antero-lateral and postero-lateral groups. In the third lumbar segment the number of healthy cells in both the lateral groups rapidly diminished from above downwards. The central and mesial groups remained healthy. In the fourth and fifth lumbar segments practically all the cells in the lateral groups were degenerated. In the first sacral segment, however, normal cells again appeared and gradually increased in numbers in the antero-lateral group, but the postero-lateral group was entirely degenerated. Very similar

conditions were present in the second and third sacral segments. The undegenerated cells in these segments must therefore correspond to the unaffected muscles which were left (obturator, psoas, &c.). The anatomical distribution of the nerves in the lumbo-sacral region indicated that the psoas-iliacus was innervated from the antero-lateral and postero-lateral groups in the second and third lumbar segments chiefly, the obturator internus, and pyriformis (and perhaps the gemelli and quadratus femoris) from the antero-lateral group in the first and second sacral segments, the pyriformis from the second sacral. It was remarkable how far down the cord the nerve-cells for the hamstrings and external rotators of the hip descended. In the mesial group of the second and third sacral segment there were a considerable proportion of degenerated cells, while in the fourth segment the proportion of diseased to healthy cells was not nearly so great. This mesial group was the centre for the levator and sphincter ani and very probably for the striped muscles of the urethra. In the upper cervical region of the cord this mesial group was very small, but at the fourth and fifth cervical segments, where the nerves for the diaphragm arose, this group became very large. Probably this mesial group of nerve-cells supplied the muscles of the trunk both at the back and anteriorly.—Dr. BYROM BRAMWELL, Dr. NOËL PATON, and Dr. D. WATERSTON spoke, and Dr. BRUCE replied.

The following gentlemen were elected office-bearers for the session 1901–1902:—President: Professor T. R. Fraser. Vice-Presidents: Dr. James Andrew, Dr. Charles Underhill, and Dr. James Ritchie. Councillors: Dr. J. W. Ballantyne, Dr. George Kerr, Dr. K. M. Douglas, Mr. H. J. Stiles, Dr. A. G. Miller, Dr. Noël Paton, Dr. W. Russell, and Dr. Logan Turner. Treasurer: Dr. Harvey Littlejohn. Secretaries: Dr. Melville Dunlop and Dr. Alexis Thomson. Editor of Transactions: Dr. William Craig.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

The Rôle of Protozoa in the Causation of Disease.

A MEETING of this section was held on Nov. 1st, in the Royal College of Surgeons, Dublin, when Professor MCWEENEY delivered the presidential address on the Rôle of the Protozoa in the Causation of Disease, with Special Reference to Malaria, Vaccinia, and Cancer. The address was illustrated with lantern and microscopical demonstrations. After some introductory remarks, in which Professor McWeeney set forth the reasons which had induced him to select the parasitic protozoa as the subject of his address, the speaker briefly explained the characters of the protozoal organism. The single cell of which it was composed must exercise the several functions which among the mesozoa were carried out by the groups of differentiated cells termed organs. It must move, feed, and multiply. The manner in which the protozoal cell discharged these functions was taken as the basis of classification. There were four great classes of protozoa—the rhizopoda, sporozoa, flagellata, and infusoria. The rhizopoda comprised the lowliest of living beings, amœbæ, formless lumps of protoplasm, moving by means of temporarily emitted pseudopodia, and differing from a human leucocyte only in their capacity for leading an independent existence. Amœbæ were normal inhabitants of the human intestine, where they seemed to have been first seen by Lambl in 1870. Lösch in 1875 ascribed dysentery to their parasitism. Since then an extensive literature had accumulated with reference to the causal relation in which amœbæ were supposed to stand to a certain form of dysentery termed "tropical" by Councilman and Lafleur in 1891. The speaker sketched the development of this doctrine, pointed out the sources of error that underlie not only some of the reputed findings of amœbæ in the fæces and in the pus of liver abscesses but also invalidate some of the reputed positive results of animal experiment, and concluded this part of the subject by saying that in view of the positive results recorded by Quincke and Roos, Kartulis, Kruse and Pasquale, and Zancarol from the injection of bacterially sterile liver-pus into the rectum of cats it was hardly possible to escape from the conclusion that the amœba coli was, by itself or in conjunction with bacteria, responsible for the causation of "tropical" dysentery. He did not know whether any case of this disease had as yet been recorded in Ireland. He demonstrated a coloured screen picture of amœba coli. He then proceeded to describe the sporozoa, animals which in their adult stage appeared as amœbæ or else as more or less definitely-shaped protoplasmic masses, but which multiplied by division into a greater or lesser number of encapsulated germs, which from their resemblance to the reproductive bodies of the fungi were often spoken of as spores. They had recently been shown to possess a highly remarkable sexual method of reproduction. Passing over the gregarinidæ, as not found in the higher animals, he desired to lay stress on the next order, the coccidiidea species of coccidium, which produced pseudo-adenomata in the bile-ducts of the rabbit, and plaque-like thickenings of the intestinal wall. Severely affected animals died from cachexia and anæmia. The parasite had two developmental cycles, both passed within the same host-animal. The mature animal consisted of a rounded, coarsely granular mass of protoplasm (schizont) lying within an epithelial cell of the rabbit's intestine or bile-duct. It split up into numerous sickle-shaped segments (merozoites) which became amœboid and infected neighbouring cells. At a certain period schizogony came to an end, and two varieties of mature parasite became differentiated, one larger, more evenly granular, the micro-gamate or female; the other smaller, more hyaline, the micro-gametocyte. Bi-flagellate bodies, the micro-gamates or spermatozoa, were emitted from the latter, each carrying with it a part of the nucleus. They penetrated into and fertilised the macro-gamate, which increased greatly in size, assumed an oval shape and a doubly-contoured capsule, and, becoming detached from the epithelium, emerged with the fæces into the outer world as a "sporont"—the coccidium of the older writers. Soon its contents became divided into four sporoblasts, each of which assumed a tough membranous investment, and being set free by the decomposition of the outer cyst-wall was called a spore. Its destiny was to gain access to the alimentary canal of a fresh animal with the food and there to liberate the two sickle germs (sporozoites) which had been meanwhile formed in its interior. He alluded to the reduction of the chromosomes and the rest-körper or *corps de réliquat*. This interesting life-history had been revealed through the labours of L. and R. Pfeiffer, Labbé, Léger, Schaudinn, Siedlecki, and Simond. What made it the more interesting was that it ran strictly parallel to the life-history of the malarial parasites which had been recently so admirably cleared up through the work of Manson, Ross, Bignami, Grassi, and MacCallum. These parasites constituted the next order of sporozoa, the hæmosporidia. Professor McWeeney then proceeded to trace out the developmental cycle of the parasites of human malaria and to show that the phenomena were by no means isolated, but were strictly parallel to what had been shown to hold good for the coccidiida. The reproduction of the malarial parasite by sporulation in the circulation of the warm-blooded host was homologous with the schizogony of the coccidium in the rabbit's intestine. The sexual process of the malarial parasite differed from that of the coccidium in one feature only—the complication of a change of host, from the warm-blooded vertebrate to the cold-blooded invertebrate animal. This change was, of course, effected by the agency of the mosquito. He insisted upon this homology as bringing the malarial parasite into line with other forms of parasitic protozoa. Turning next to the third class of protozoa, the flagellata, the speaker detailed the main facts known regarding this parasitism in the lower animals. The best known of these parasites was the hepetomonas, or trypanosoma Lewisii, which was often found in the blood of the common wild rat. Through the courtesy of Professor Cunningham he had that morning examined the blood of 15 rats at the Zoological Gardens, and found the parasite in seven. He had brought one of the animals and now showed its blood, containing numerous actively motile fish-like parasites, each as long as three or four red blood discs, and provided with a long flagellum and an undulating membrane. He demonstrated a film stained by Romanowsky's method, showing the macro- and micro-nucleus stained red, and also the flagellum, an interesting factor for which he could not at the moment satisfactorily account. Although this parasite seemed harmless to the rat, a closely allied form, trypanosoma Brucii, had been shown to be concerned in the causation of surra, a disease of transport animals in India, and of the famous *nagana* or tsetse-fly disease in the warmer parts of Africa. He demonstrated a stained blood-film from a

guinea-pig, which he owed to the kindness of the late Professor Kanthack. As compared with those in the rat, some were blunter at the non-flagellate end. This did not hold good in all cases and he could see no other difference. In conclusion, the speaker referred to parasitic protozoa of uncertain biological position. Piroplasma bigeminum was a minute pear-shaped or oval speck of protoplasm, often occurring two together in the red corpuscles of the ox affected with parasitic hæmoglobinuria or Texas fever. The parasite was discovered a few years ago by Theobald Smith and Kilborne in the United States. They found that its propagation from one ox to another was effected by ticks. A unique feature of this transference was that it was carried not by the female tick that had actually sucked up the infected blood but by her progeny. Owing to the courtesy of Professor Mettam, principal of the Royal Veterinary College of Ireland, he was in a position to show specimens of the parasite found for the first time in Ireland by that gentleman in the blood of cattle suffering from red-water. Of still more uncertain position was the supposed parasite of vaccinia discovered by Guarnieri in the epithelium of the inoculated rabbit's cornea. Through the kindness of Dr. Gustave Mann of Oxford he demonstrated a preparation showing these bodies in almost every epithelial cell. The subject was one of some complexity and opinions were much divided as to the interpretation of the "bodies" in question. He preferred to reserve this part of the subject for a further communication later in the session. Lastly, the supposed protozoal etiology for carcinoma was a still more doubtful topic even than vaccinia. The tendency among recent Italian workers was to ascribe the disease to a blastomycete or yeast-form, which would, of course, be reckoned among the vegetable parasites. Sanfelice of Naples claimed to have obtained from fruit-juice an organism of this kind which had yielded positive results on inoculation. In England Plimmer had obtained from a rapidly-growing cancer a growth of an organism the biological nature of which appeared to be doubtful. The results of the inoculation-experiments seemed to the speaker to be far from convincing. The several varieties of cell-inclusions that had been so industriously worked up and identified at first with coccidia, then with blastomycetes, seemed to him to be susceptible of other explanations. He now demonstrated some of these inclusions. In this connexion it was interesting to note that ulcerated swellings exceedingly like tumours were developed on the roots of the cabbage and turnip as the result of the intracellular parasitism of plasmodiophora brassicæ (Wor), an amœboid organism reckoned by some with the myxomycetes and by others with the protozoa. Cachexia and death of the host-plant were caused by this intracellular parasite, which thus formed an interesting analogy to what was sought to be established in the case of human cancer. He demonstrated sections of the affected roots showing the cells filled with the parasitic protoplasm and subsequently with the small spores, into which it divided.

The section then adjourned.

BIRKENHEAD MEDICAL SOCIETY.—A meeting of this society was held on Nov. 8th, Dr. J. Pinkerton, the President, being in the chair.—Dr. Nathan Raw (Liverpool) read a paper entitled, "The Diagnosis and Treatment of Tuberculosis, with Special Reference to the Open-air Method." He said that consumption was the scourge of all civilised communities. Its ravages were world-wide; in Europe alone it was estimated that 1,000,000 people died annually from it. During the past 50 years the death-rate had in England been reduced 50 per cent. and he predicted that in future years it would be still further reduced. In Italy the disease had long been held to be infectious; even as far back as 1752 disinfection of the clothing of consumptive patients and lime-washing of the rooms and houses occupied by such patients were held to be necessary, and in Spain and in the south of France 100 years ago the same opinions existed. A great advance in their knowledge of the disease was brought about by the discovery by Professor Koch of the tubercle bacillus in the sputum and lungs of phthisical patients, and they now looked upon this bacillus as a constant factor in the causation of the disease. Dr. Raw discussed the question of the hereditary transmission of the disease. He held that there was little or no evidence to prove that such transmission did occur, but he considered this question of little importance as compared with infection after birth. In his opinion there was very little specific tendency in children of tuberculous parents to become infected, except in so far that such children were not so strong as those of healthy parents, and therefore more susceptible to disease of any kind. The commonest way in which patients became infected was by the inhalation of tubercle bacilli. He then described the various modes of invasion of the disease, and in referring to the pleuritic forms stated that he was not by any means convinced that all cases of pleurisy were tuberculous, as was sometimes stated. He next discussed the diagnosis of tuberculosis and its treatment. The latter he divided into two heads: (1) preventive and (2) specific. Under preventive treatment he urged that phthisical patients must be taught not to spit upon the ground or floors of rooms, but should carry spittoons or some such arrangement in which the sputum could be collected and then destroyed either by treatment with disinfectants or by burning. The clothing and utensils used by such patients should be disinfected, and rooms which had been used by such patients should be disinfected, painted, and repapered before use by other individuals. He considered that an insufficient air-supply to the apices of the lungs was a very important agent in inducing phthisis, and he thought that all children ought to be taught to breathe properly, so as to expand their lungs thoroughly. In the open-air treatment the main object was to make the patient live out of doors as much as possible and also to improve his nutrition. If they fattened their patients then the disease might be left to take care of itself. At Nordrach patients were often in the open air for 10 hours every day, and that in spite of fog and cold. Excessive cold was not harmful even in advanced cases, as the results of treatment at Davos showed. The question of rest or exercise for such patients was a very vexed one, some authorities insisting upon absolute rest in the open air, others recommending gradually extended exercises. Complete rest with regular breathing exercises gave in many cases excellent results. A febrile condition with a temperature of 100° F. or over was an absolute bar to exercise. A three to six months' course of sanatorium treatment would generally arrest the disease. Pure air, an equable temperature, and a maximum of sunshine were the desired conditions, and given these cases would do as well in England as abroad. Specific medication had proved useless. Drugs could only be of use by helping to render the tissues more resistant. Dr. Raw mentioned some drugs and their combinations which had in his hands proved of service in the treatment of symptoms, including creasote or guaiacol as routine treatment. He laid great stress upon the importance of attending to the feeding-up of the patient, but he was not in favour of forced feeding as practised on the continent. In conclusion he said that an organised effort on the part of the medical profession, the health authorities, and the public must be made in fighting this disease. Healthy houses must be provided and insanitary areas must be swept away. He urged voluntary notification of the disease and voluntary removal of patients, municipal sanatoriums for curable cases, and isolation hospitals for incurable ones.—Dr. A. C. E. Harris, Mr. G. S. Stansfield, Dr. F. Johnston, Mr. F. Vacher, Dr. W. R. Dalzell, Dr. W. R. Floyd, and the President took part in the discussion which followed and Dr. Raw replied.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Oct. 30th, the chair being eventually taken by the incoming President, Dr. J. G. Douglas Kerr (Bath).—A vote of thanks was accorded to Dr. Frederic Bagshawe (St. Leonards) for his services as President during the past session.—The President then gave a short address, referring to the great improvements which had been made in bathing establishments at the different British spas during the past 20 years and to the impetus which had been given by the Royal Medical and Chirurgical Society to the study of balneology and climatology within the last six or seven years, specially mentioning the first part of the report published in book form by the society and the fact that the second volume of the report would be issued shortly. There was a possibility, he said, that a tour of inspection through the British health resorts might be arranged by the society during the ensuing session.—Mr. King Houchin (London) read a paper on the Treatment of Syphilis by Inunction. He said that the treatment of syphilis as practised at Aix-la-Chapelle could be, and was, carried out at most of the British

spas and even in London. He had discovered after some five years' practical experience that satisfactory results could be obtained in London. During treatment great care of the teeth should be taken and the patient should use a mouth-wash of chlorate of potash, with or without some mild astringent, night and morning and after meals. The patient should remain for 20 minutes or half an hour in a hot bath, preferably mineral, the temperature of the bath being from 98° to 100° F. The preparation commonly used for inunction was the unguentum hydrargyri (B.P.). After the bath a portion of the body was selected for the inunction. The method he usually followed was to divide up the body into five sections so that in five days the whole of the body surface had been subjected to inunction. This should be repeated on consecutive days, if possible, until from 25 to 30 applications had been made. This constituted "a course," which should be repeated in six months' time, two or three courses usually being sufficient for all ordinary purposes, and the patient might then be considered to be cured. He advised the inunction to be carried out by a glass rubber. The treatment had the following special advantages for patients who were either quite unable to leave their homes or for whom it was undesirable to do so: (1) the system could be saturated to toleration; (2) digestion was not interfered with; (3) a much larger dose of mercury could be tolerated by the skin than by the mouth; (4) mercurial cachexia was seldom seen under this method of treatment; and (5) the patient, on the contrary, usually gained weight, colour, and nutrition.—Dr. Fortescue Fox (Strathpeffer) suggested that it might be possible to promote the absorption of mercury by connecting the rubber with the pole of a battery. There were other chronic disorders (not syphilitic) that derived benefit from mercurial inunction—for example, some forms of dyspepsia and malnutrition.—Dr. Sansom (London) said that from personal experience of cases thus treated he considered that the institution managed by Mr. Houchin in London on the lines of those at Aix-la-Chapelle and Wiesbaden had supplied a distinct want. He would include in the list of cases to be thus treated those of syphilitic disease of the cerebral arteries.—Dr. G. A. Leon (Sidmouth) said that the paper was of especial interest to the society as it indicated how treatment usually carried on abroad could be made successful at any health resort in England. He had visited Aix-la-Chapelle and preferred in some ways the methods there. He thought that the hand was the best vehicle for inunction and that treatment at a spa with the discipline there was often necessary and generally useful. In tertiary cases several courses of daily inunction were necessary in many instances, the course consisting of from 50 to 150 days. In an early case of secondary disease four courses spread over two years, with from 30 to 40 inunctions in each course, was necessary to be safe. A more astringent mouth-wash than chlorate of potash should be used, such as dilute acetate of lead and alum. In advanced tertiary cases iodide of potassium was most necessary to arrest the disease until the mercurial inunctions could have their effect. He agreed with Mr. Houchin in attaching no special importance to the sulphur waters, but a hot bath was requisite before inunction.—The President said that at Aix-la-Chapelle and at Bath a very large number of applications were found necessary in tertiary syphilis—many more than were recommended by Mr. Houchin. The temperature of the bath was never allowed to exceed 95°. Artificial rubbers had been tried but had been discarded and the hand method had shown better results. He considered that the discipline entailed by residence at a spa was a great factor in assisting the cure.

ROCHDALE AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on Nov. 7th.—Mr. R. Burdett Sellers gave the presidential address on an Acute Infectious Disease. After referring to the diminished death-rate, notably from zymotic diseases and phthisis, Mr. Sellers said that there was one very common disease which showed little reduction in its death-rate—viz., pneumonia. This was an acute infectious disease caused by the diplococcus pneumoniæ of Fraenkel. The pneumococcus, however, might cause other conditions, as empyema, peritonitis, ulcerative endocarditis, &c., which might be primary or secondary to an attack of pneumonia. The coccus was often present in the saliva of healthy individuals. They had in and about them the organisms of many diseases only waiting an opportunity for developing malignant action. Such oppo tunity came with impaired vitality due to chill, fatigue, or other cause. Leucocytes were increased in the pyrexial stage of pneumonia and were diminished with the critical fall of temperature. The crisis was probably due to the formation of an antitoxin in the blood (Washbourn). The serum of patients convalescent from pneumonia was said to have protective power. Non-alcoholic cirrhosis of the liver might be due to an antecedent attack of pneumonia, judging from liver changes during an attack of the disease. With regard to treatment pneumonia could not be cut short by any known means. The routine saline treatment consisted of the administration of laxatives, with a liquid unstimulating diet and complete rest in an airy room at a temperature of above 60° F. with a proper degree of moisture. Death was generally due to heart failure, hence depressing treatment should not be employed. Special circumstances might call for the use of quinine in full doses, or, in cases of low type, tincture of perchloride of iron. It was unwise to reduce the "normal temperature of pneumonia" (103° or 104°) unless delirium or other condition called for interference. In hyperpyrexia the cold bath or similar remedy was the only measure of any use, large doses of quinine being auxiliary. The value of poultices was doubtful and they restrained respiratory movements. Ice applications might relieve pain. Strychnine and caffeine were most useful to combat cardiac failure. Oxygen was valuable where the respiratory surface was small. Dr. G. Balfour's chloral treatment was also described by Mr. Sellers.—A discussion followed the address in which Mr. G. W. Malim, Mr. W. Stanwell, Dr. D. Richmond, Dr. A. Wallace, Dr. A. B. McMaster, and Dr. W. Hodgson took part.—Mr. Sellers received a hearty vote of thanks for his interesting address.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—The annual general meeting of this society was held on Nov. 8th, Mr. Mayo Collier, the President, being in the chair.—Mr. Lennox Browne showed the Nernst Electric Lamp as one giving a far whiter light than any in present use.—The President showed (1) a case of Malignant Disease of the Pharyngeal Wall which was inoperable, and it was proposed to submit the patient to electrical treatment by Dr. J. Macintyre of Glasgow; (2) a case of Abscess of the Maxillary Antrum associated with Facial Paralysis which had subsided promptly after surgical treatment; and (3) a case, in the person of a surgeon, who was present and spoke on his own case, in which asthma had been relieved after the removal of nasal polypi.—Mr. Chichele Nourse showed a case in which a Laryngeal Growth had Disappeared after the removal of Nasal Polypi.—Mr. Lennox Browne remarked on these last two cases and said that although they were by no means unique it was useful to record them, and he trusted that such cases would be always brought forward in view of the fact that quite recently doubts had been thrown on the importance and frequency of asthma and other diseases arising as nasal reflexes, notwithstanding that they had been accepted by observers of repute all over the world.—Mr. John Bark, while accepting these cases as reported, reminded the Fellows that not all were cured.—Dr. P. H. Abercrombie showed a case of Black Tongue from which Dr. Wyatt Wingrave had prepared microscopic slides and furnished a bacteriological report.—Mr. Lennox Browne made a short communication on the Preliminary and After-treatment of Operations on the Mouth and Fauces, insisting on (1) preliminary antiseptic washes; (2) sterile instruments; (3) complete rest of the parts and of the body generally after operation; (4) the use of mouth-washes by means of the throat-syringe instead of gargles; and (5) the non-administration of internal drugs, such as the bromides, which might cause skin eruptions liable to be mistaken for symptoms of septic infection.—Remarks were made by Dr. Haslam, Dr. Wyatt Wingrave, and the President.—Dr. J. Macintyre then delivered his presidential address on the Application of Physical Science to the Surgery of Diseases of the Throat and Nose. This was illustrated by the exhibition of many instruments and by lantern photographs. The following office-bearers were elected at this meeting: President: Dr. Macintyre (Glasgow). Vice-Presidents: Dr. Greville MacDonald, Dr. Walton Browne (Belfast), and Dr. J. D. Hillis (Dublin). Council: Mr. Mayo Collier, Dr. Culver James, Mr. Claud Woakes, Dr. Atwood Thorne, Dr. J. M. E. Scatliff (Brighton), Dr. R. H. Woods (Dublin), and Dr. W. H.

Kelson. Treasurer: Mr. Lennox Browne. Secretaries: Mr. Chichele Nourse and Dr. Abercrombie.

CARDIFF MEDICAL SOCIETY.—The ordinary monthly meeting of this society was held on Nov. 7th, Dr. D. R. Paterson, the President, being in the chair.—The following new members were elected: Dr. Evelyn J. Evatt and Dr. R. Cameron (Cardiff) and Dr. T. J. Jenkins (Pentre).—The meeting was devoted to a discussion on Infant Feeding.—Dr. A. P. Fiddian, who opened the discussion, considered the subject under the heads of (1) the feeder—mother or nurse; (2) the infant; and (3) the food. In regard to (1) he held that devotion to duty should take the leading place, affection adding sweetness and acceptability to the discharge of it. He would allow of no arrangements for amusement or ease that would interfere with the infant's needs. He described the qualities of a good nursing-woman and some physical defects that rendered her inefficient. He mentioned the instance of a few women who took alcohol in moderate quantities for the arrest of the lacteal secretion when weaning, and called attention to the need of a scientific inquiry into the effects of moderate amounts of stimulant on the formation of milk. 2. The great variations in children were discussed, some failing to thrive during the earlier months, child after child in the same family, while in others there was a tendency to excessive adipose tissue with a minimum of feeding. 3. This part of the subject was rendered instructive by illustrative standards showing the composition of milk lent by the Aylesbury Dairy Company and the Friern Manor Dairy Farm, Limited, the former including the milk of the goat, ass, and mare, as well as human and bovine milks. The Gaertner process and other methods of humanising milk were discussed. In regard to sterilisation, Dr. Fiddian's own observations had not supplied him with any instances of scurvy from the use of sterilised milk, but condensed milk had done so.—The President followed, and in the course of his remarks called attention to the Walker-Gordon laboratories in America and in a few English towns where the food was prepared according to the medical attendant's prescription.—A long and interesting discussion followed, in which the following gentlemen took part: Dr. Ewen Maclean, Dr. E. Walford, Dr. R. Prichard, Dr. H. G. G. Cook, Dr. Mitchell Stevens, Dr. Eldon Pratt, Mr. W. B. C. Treasure, Dr. William Sheen, Dr. A. E. Taylor, Dr. H. H. Tidswell, and Dr. G. N. W. Thomas.—Dr. Fiddian replied.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the forty-sixth session of this society was held on Nov. 1st, Dr. Thomas C. Meggison, the President, being in the chair.—After the election of several new members Mr. G. Chisholm Williams read a paper on High Frequency Electrical Currents in the Treatment of Certain Diseases. The paper was divided into two parts, one dealing with the method of production from the electric-light mains, Wimshurst machine, or accumulators. A complete description of the apparatus required was given and the various ways of utilising the currents by auto-conduction, auto-condensation, resonator, or bi-polar method, were described and demonstrated. The second part of the paper dealt with the following diseases: pulmonary tuberculosis, tuberculosis of joints, tuberculous laryngitis, lupus, eczema, psoriasis, rodent ulcer, malnutrition from rickets and dyspepsia, sciatica and neuralgia, and diabetes. Cases and notes of the above were shown or read.—A discussion followed in which the following took past: the President, Dr. R. E. Scholefield, Dr. C. H. Hartt, and Dr. G. Herschell.—A conversazione will be held after the meeting on Dec. 6th.

HORSE AMBULANCES.—At the meeting of the Manchester Infirmary Board on Oct. 28th it was stated that horse ambulances had been established by the Watch Committee for use in case of accidents or illness in the streets. They will be at one of the police stations, will be available by day or night, and may be summoned by telephone. It is intended also to take to the hospitals, without charge, any cases of illness or serious accident occurring at works. The charge for the removal of cases from private houses to the various hospitals will be at the discretion of the chief constable. It was stated, however, that it would be at the rate of 7*s.* 6*d.* up to a mile, 10*s.* over a mile, and there would be a special rate outside the city.

Reviews and Notices of Books.

Pulmonary Tuberculosis: its Prevention and Cure. By CARLO RUATA, M.D., Professor of Materia Medica at Perugia. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1901. Pp. 143. Price 3*s.* net.

THIS little work, written in English by Dr. Ruata, who was one of the Italian delegates to the British Congress of Tuberculosis, has for a chief feature its warm advocacy of antiseptic inhalations in the treatment of pulmonary tuberculosis. Of the many aromatic volatile substances suitable for this purpose the author prefers a combination of chloroform and creasote dissolved in alcohol, administered by means of a wire-gauze mask covering both nose and mouth. The use of such a mixture in oro-nasal inhalers has been in vogue with English physicians for nearly 20 years, but not, generally speaking, in the uninterrupted way, continued over long periods, which Dr. Ruata considers as essential to success. He is, however, careful to point out that it is to be regarded only as a useful adjunct to, and in no sense as a substitute for, the open-air treatment, which the patients whose cases he describes were at the same time made to adopt as far as possible. The benefit derived was in all of these instances very great and in many a complete cure was effected.

In regard to the sanatorium treatment, it is interesting to note that Dr. Ruata recognises the claim to priority of the English physician, Dr. George Bodington of Sutton Coldfield in Warwickshire. He it was who first established the value of the open-air treatment and clearly enunciated rational rules for the management of consumption. His teachings were set forth in a pamphlet published in 1840 and were met with such a storm of disapproval and abuse that its author, who was in consequence looked upon as little short of a lunatic, was obliged to abandon his method of treatment and ended by converting his hospital for consumption into a lunatic asylum. Dr. Ruata has little faith in the various serums hitherto tried as curative agents, and none in the swallowing of drugs, which only relieve symptoms and cannot stop the disease. He is a believer in the transmission of tuberculosis by heredity, as well as in Koch's statement that the disease cannot be contracted by man from drinking the milk or eating the meat of tuberculous cattle; and he gives in an appendix in support of these views some very striking statistics, which, however, involve such complicated considerations that the conclusions which he draws from them are not likely generally to be accepted as proven.

We trust that Dr. Ruata, who, by the way, has lately been defending us manfully in regard to the Transvaal war against the Italian pro-Boers, will find many readers for his sensible and practical little book in this country.

Studien über den Echinococcus Alveolaris sive Multilocularis. (Studies upon the Echinococcus Alveolaris or Multilocularis.) By N. MELNIKOW-RASWEDENKOW. Jena: Gustav Fischer. 1901. 8vo. Pp. 296. With six plates and 94 figures. Price 16 marks.

THIS elaborate research into the subject of echinococcus multilocularis—or, as the author prefers to call it, echinococcus alveolaris—is based upon a personal investigation of 101 specimens collected from Russia, Germany, Switzerland, and Austria. Dr. Melnikow-Raswedenkow first gives a full account of the specimens, in which he also includes clinical particulars whenever possible. A detailed microscopical examination is also often appended. In regard to the parasitology the author holds that the parasite causing the multiloculated disease is distinct from that causing the uniloculated. The former is not brought about by the behaviour of the tissues in relation

to the parasite but is due to the parasite itself. Separate chapters are next devoted to the general and special pathology of the disease. The primary disease is most often found in the liver. The secondary deposits may be found in various organs and are due to the embryos being carried to them either by the blood or the lymph stream. When the embryo arrives from the alimentary canal it produces a many-chambered chitinous coil in which both ovoid embryos and scolices are produced. In the uniloculated variety scolices only are found. The embryos may penetrate into the tissues by amœboid movement. Some of these embryos may then develop into chitinous cysts in which new embryos are eventually found or they may be converted into sterile cysts. Not infrequently the embryos are attacked in the animal tissues by phagocytes and are destroyed. The toxins manufactured by the parasite stimulate the tissues to greater growth and granulation tissue may form. Dr. Melnikow-Raswedenkow has also investigated echinococcus alveolaris in animals and he found the changes produced in the tissues to be the same as those in man. The intermediate host plays a relatively limited rôle in the case of the echinococcus alveolaris owing to the diminished resistance of the scolices which arriving in the alimentary canal are no longer able to develop. In discussing the geographical distribution, the author says that the disease occurs more frequently in Russia than elsewhere. After reviewing the literature of the subject he finally discusses the symptoms, etiology, and treatment, and appends a useful scheme to be used in the anatomical and experimental investigation of multiloculated hydatid disease. The disease is distinctly dangerous to life; its treatment is mainly surgical. Those interested in hydatid disease will find Dr. Melnikow-Raswedenkow's monograph in every sense an excellent one.

Practical Text-book of Plant Physiology. By DANIEL TREMBLY MACDOUGAL, Ph.D., Director of the Laboratories of the New York Botanical Garden. London: Longmans, Green, and Co. 1901. Pp. xvi, 325. Price 7*s.* 6*d.*

THE teaching of the physiology of plants has been somewhat neglected in this country; indeed, even in places of more advanced education this all-important branch of botany has not found, in some instances, a place in the curriculum until comparatively recently. Now, however, the botanists of examining bodies insist upon its importance, so that it is becoming more widely taught as time goes on. This being so, the appearance of the work before us is most opportune, for teachers are in want of a book which covers more than the mere elementary facts, but not so advanced as Pfeffer's Physiology of Plants, for example. For their needs Dr. Macdougal's work will be found to be an excellent book; and also for their students who already have become acquainted with the more important facts of the structure, &c., of plants, besides possessing a knowledge of chemistry and physics without which many of the phenomena of plant-life will be but very imperfectly understood.

As to the aim and scope of the work, we cannot do better than quote what is said by the author in his preface. "The arrangement of the subject ..... is an effort to place before the student a method by which a working knowledge of the physiological complex of the plant may be acquired. The disposition of the subject matter entailed by this treatment consists, briefly stated, in the study of the particular functions and properties of the organism, in connection with the agencies and forces which influence or initiate them, and a consideration of the general processes of plant-life." The work, as is indicated by the title, is a practical one, but, as the author states, "a discussion of the principles of the subject is interwoven with the directions for practical demonstration in order to afford means of interpretation of the experimental results secured."

The volume contains much which may prove of interest to medical men—for example, the action of poisons and anæsthetics on the streaming movements exhibited by the protoplasm in the cells of the leaf of *Elodea*, and the hairs on the stamens of *Tradescantia*, for instance. Thus if such a structure is subjected to the action of the vapour of either ether or chloroform the movements stop entirely after a short time; the rotation is resumed, however, on passing over air provided, of course, the anæsthetic has not been allowed to act for too long a time. Again, carbonic acid gas acts in much the same manner as ether, all movements in a cell being stopped when the gas is passed over. The time taken to stop the motion of the protoplasm naturally varies in different plants; and further, as a human being may take, by gradually increasing the doses of a poison, what normally would be a fatal quantity, so also it is possible to educate, as it were, the protoplasm of a plant, for if a staminal hair of *Tradescantia* is placed in an atmosphere containing carbon dioxide which is insufficient in quantity to stop the protoplasmic movements and after a time is replaced by an atmosphere containing a higher percentage of the carbonic anhydride, it is found that if the process is continued it is possible to have the movements going on in the pure gas.

The work is illustrated by 159 figures; the paper, print, and "get up" are extremely good, and the work will not fail to prove of great value.

Verhandlungen der Siebzehnter Versammlung der Gesellschaft für Kinderheilkunde. (Transactions of the Seventeenth Meeting of the Society for Children's Diseases.) Edited by Dr. EMIL PFEIFFER. Wiesbaden: J. F. Bergmann. 1901. 8vo, pp. 260. Price 8*s.*

SEVERAL subjects of considerable practical interest are included in these Transactions. Under Nervous Diseases Dr. Falkenstein (Königsberg) contributes a valuable paper on Amaurotic Idiocy, in which he details and analyses a case and reviews the literature of this rare disease. Dr. Siegert (Strassburg) gives an account of the Pathology and Treatment of Idiocy due to Infantile Myxœdema. When considering the diagnosis he speaks of the alteration in the bones of the skeleton and of the value of radiography. Thyroid treatment produces a great improvement in many cases and a cure in a few. Professor Heubner (Berlin) details a very interesting case of Multiple Gliomata of the Spinal Cord in a Child, aged six years, complicated with Meningitis and Hydrocephalus. Dr. Fischbein (Dortmund) in a paper on Laryngismus Stridulus attaches an unusual importance to the dietetic treatment.

Among diseases of the organs of digestion a valuable paper is contributed by Dr. Ungar (Bonn) on Chronic Peritonitis and Tuberculous Peritonitis. The author almost doubts the occurrence of a chronic peritonitis apart from tuberculosis. He is not as enthusiastic upon the value of the treatment of tuberculous peritonitis by abdominal section as are some writers, but he recommends it in the severer cases. There are various papers on the artificial feeding of infants by several authors—viz., Dr. Biedert, Dr. Adolph Schmidt, Dr. Bachhaus, and Dr. Oppenheimer, whereas Dr. Conrads discusses the reasons why mothers are not able to nurse their children. Dr. Biedert's article upon the Establishment of Institutions for the Feeding of Infants and Children is certainly worthy of attention. He gives approximately what would be the cost of such an institution and its maintenance. In the discussion on this subject some difference of opinion was expressed. Professor Heubner also contributes a somewhat technical paper on Infantile Atrophy, and Dr. Camerer, jun. (Stuttgart), continues the account of an investigation into the chemical composition of the infant's body based on a case in which the analysis was performed by Dr. Söldner. Dr. v. Ranke (Munich) advocates the excision of the diseased

tissues in Noma and relates three cases successfully treated in this way. Dr. Rey (Aachen) speaks of Cystitis as a Cause of Retention of Urine in Children under Three Years of Age. He looks upon it as a contra-indication to the operation for phimosis in these cases.

Dr. Hochsinger (Vienna) gives an elaborate and interesting account of Phalangitis due to Congenital Syphilis. Fifty-five of his cases occurred during the first year of life and nine at a later period. He says that the affection is one of the most curable of those occurring in early hereditary syphilis. Besides the paper on Tuberculous Peritonitis referred to above there are two other contributions to the subject of tuberculosis—namely, on its Relation to Scrofula and its Prophylaxis. Professor Ponfick (Breslau), in a very interesting paper, concludes that Scrofula is a comprehensive term, including several well-defined processes too long grouped together. He recognises three such groups in which the inflammatory affections are due to (1) pyogenic microbes, (2) the tubercle bacillus, and (3) a combined infection of these micro-organisms. Dr. Feer (Bâle) enumerates the mostly well-known measures for the Prevention of Tuberculosis in Children.

Morbus Hungaricus. (The Hungarian Disease.) By Dr. TIBERIUS VON GYÖRY. Jena: Gustav Fischer. 1901. 8vo, pp. 190. Price 5 marks.

THIS elaborate work by Dr. von György is largely of antiquarian interest. He has collected together the writings upon this disease down to more recent times, and he closely analyses the views advanced in them. The subject matter is chiefly discussed under the headings of (1) the real nature of the morbus Hungaricus; (2) its confusion with other diseases; (3) the locality and period of its epidemics; (4) the prophylaxis; and (5) the treatment. From the modern point of view the chapter in which Dr. von György ably discusses what was the real nature of this disease is of the greatest interest. He concludes that the morbus Hungaricus was none other than typhus fever. He discusses and finally sets aside the objections which might be raised against this view, such, for instance, as the occasional absence of the rash and the presence of diarrhœa. The medical bibliographer will undoubtedly be greatly indebted to Dr. von György for his admirable research into the morbus Hungaricus, but the work hardly belongs to the category of books which can be of real practical value to the busy modern student of medicine.

LIBRARY TABLE.

Hong-Kong. Report of the Medical Officer of Health on the Epidemic of Bubonic Fever (Plague) during the Half-year ending June 30th, 1901. Hong-Kong: Noronha and Co. 1901. Pp. 35.—Dr. Francis W. Clark, medical officer of health of Hong-Kong, states that the total number of cases of plague reported during the half-year was 1488, of which 26 were among Europeans and 1415 among Chinese (including 308 dead bodies found lying in the streets or floating in the harbour), the remaining 47 being among other Asiatics. A large number of Chinese, however, left the colony as soon as they felt at all unwell, some of whom showed unmistakeable signs of the disease on arrival in Canton and its neighbourhood. The total number of deaths recorded during the half-year was 1417, of which nine occurred among Europeans, 1376 among Chinese, and the remaining 32 were those of other Asiatics. The death-rate among the Europeans was therefore 34·6 per cent., while among the Chinese it was 97·2 per cent., and among the other Asiatics 68·1 per cent. The disease increased rapidly from the end of March to the middle of May concurrently with the increase in the atmospheric mean temperature, but as soon as the mean temperature exceeded 80° F. the disease suddenly decreased. The number of rats collected and paid for was 48,000.

New South Wales. Twelfth Report of the Metropolitan Board of Water-supply and Sewerage. Sydney: W. A. Gullick. 1901. Pp. 89. Price 5*s.*—This report on the water-supply and sewerage of Sydney relates to the period extending from July 1st, 1899, to June 30th, 1900, and in addition to the 89 pages of letterpress contains a map, photographic views, and folding plates of graphic diagrams. The average daily consumption of water per head of estimated population supplied was 41·62 gallons, as against 41·72 gallons during the year 1898-99. The average daily supply was 19,885,953 gallons, and the estimated population supplied was 478,000. The Nepean, Cordeaux, and Cataract rivers are the sources from which the Sydney Waterworks are supplied. The combined catchment areas of the three rivers enjoy a copious and regular rainfall and extend over an area of 354 square miles. The water is brought to Sydney by courses having a total length of about 63 miles. A report on the health of Sydney by Mr. T. M. Kendall, medical adviser to the board, shows that during 1899 there were 795 cases of typhoid fever reported, with 87 deaths. The sewerage system is being remodelled so that no sewage shall be discharged into Sydney Harbour, but that all shall be conducted to two outfalls, one leading into the open sea and the other on to a sewage farm.

Zur Lehre von der Blutzirkulation in der Schädelhöhle des Menschen namentlich unter dem Einfluss von Medikamenten. (Intracranial Circulation in the Human Subject, with especial reference to the Influence of Medicines.) By Dr. HANS BERGER. Jena: Gustav Fischer. 1901. Pp. 78. Price 5 marks.—After a general survey of the history of the subject and a description of the methods of investigation hitherto adopted, Dr. Berger proceeds to an account of his own observations made on a patient who had been trephined at the posterior upper angle of the left parietal bone in consequence of severe symptoms of intracranial pressure. The aperture in the bone measured about two inches by three inches and was covered with a gutta-percha cap which carried a recording apparatus. Dr. Berger discusses three forms of cerebral movements: (1) that due to the arterial pulse; (2) that due to the respiration; and (3) the so-called vasomotor movements or undulations. The medicinal substances employed were amyl nitrite, camphor, digitoxin, caffein, cocain, ergotin, morphia, and hyoscin. A number of tracings are given showing the effects produced.

Report of the Edinburgh and East of Scotland South African Hospital. Edited by DAVID WALLACE, C.M.G., F.R.C.S. Edin., and FRANCIS D. BOYD, M.D., F.R.C.P. Edin. Edinburgh: Oliver and Boyd. 1901. Pp. 193. Price 5*s.* 6*d.*—The reviewer is apt to echo the Wise Man and to exclaim, "Of the making of many books there is no end," when he considers the number of books which have appeared dealing with the medical aspects of the South African war. But, as the preface to the present volume points out, there is a reason for publishing the records of the civil hospitals at the war. These organisations formed a special feature of the war and by a record of their work, their difficulties, and the way in which those difficulties were met guidance for the future may be had. The hospital was stationed at Norval's Pont and began work at the beginning of May, 1900, although regular work as a hospital with beds was not commenced until May 29th when 96 patients were admitted. The hospital then consisted of 100 beds, but by July it had been increased to 150. The wards consisted of four huts containing respectively two wards. Water was obtained from a spring two miles away at first, but later a tube well was bored which gave a good supply. The drinking water was all filtered through Pasteur-Chamberland filters. The volume contains reports upon both the medical and the surgical cases. The latter, as might be expected, were nearly all cases of

bullet or shell wounds. The reports of these cases in no way differ from those of cases treated at other hospitals in the war. All the shell wounds but one were septic, while the bullet wounds were as a rule aseptic. The x rays were found to be very useful in the locating of bullets and in no instance was a soft-nosed bullet found. The report upon the medical cases is nearly entirely a very interesting essay upon enteric fever. It is written by Dr. Francis Boyd, the surgical report having been supplied by Mr. David Wallace and Dr. George L. Chiene. The report upon enteric fever merits careful study, and with regard to inoculation Dr. Boyd is, as is only natural, cautious. He says: "The outlook for inoculation is hopeful. ..... While we cannot consider an inoculated person immune, it is to be hoped that we can consider that he has got an increased power of resistance." Apart from enteric fever only three cases of pneumonia were observed, one of which, in a native, was complicated with dry gangrene of the feet which were amputated. The whole report is well worth reading and the editors are to be congratulated upon the amount of interesting matter which they have supplied.

JOURNALS AND MAGAZINES.

Midland Medical Journal.—Birmingham now possesses two monthly medical periodicals. The *Birmingham Medical Review* has reached the mature age of Vol. L., whilst the first number of the *Midland Medical Journal*, the official organ of the Birmingham and District General Practitioners' Union, bears date November, 1901. The newcomer consists of 20 pages in double columns and makes a very promising appearance. It opens with a "Fore-word" by Sir James Sawyer, followed by three original articles—namely, on Pulse Taking, by Dr. Arthur Foxwell; on Cerebro-Spinal Meningitis, by Mr. E. E. Hamilton Williams; and on Right Hemianæsthesia, by Dr. T. Sydney Short. A leading article, a lengthy report of Mr. Victor Horsley's address delivered before the Practitioners' Union on Oct. 24th, correspondence, and miscellaneous literary matter complete the number. There is an editorial committee consisting of eight members, the editor being Mr. James Neal, L.R.C.P. Lond., M.R.C.S. Eng. The annual subscription is 3*s.* 6*d.*, and all communications (orders included) should be addressed to the Editor, 610, Coventry-road, Birmingham.

Scottish Medical and Surgical Journal.—The opening article of the November number is a clinical lecture by by Dr. D. Berry Hart (Edinburgh) on Four Cases of Fibromyoma Uteri; the operations performed were respectively curettage, removal of fibroid polypus, double oöphorectomy, and abdominal hysterectomy. Dr. Noel D. Bardwell of the Sanatorium, Banchory, Aberdeenshire, contributes a short paper upon Dietetics in Pulmonary Tuberculosis. He considers that in some cases too much food is given, and describes an experimental investigation in which he took part. The patients were in Brompton Hospital and had three meals daily made up of—meat, seven ounces; bacon, two ounces; one egg; milk, three pints; butter, three ounces; bread, seven ounces; sugar, one ounce; pudding, five ounces; and vegetables, six ounces. It was found that the patients throve better on this diet than on a more liberal one, containing six or seven pints of milk and 12 ounces or more of meat.

Grèce Médicale.—Both ancient and modern medicine supply subjects for the September number. The archæological articles are the following: Medicine in the Time of Æsculapius, by Dr. P. Kavadias of Athens; the Tomb of Æsculapius, by Dr. J. Svoronos of Athens; the Therapeutics of the Homeric Age, by Dr. Sp. Manghinas of Athens; and Prescriptions contained in the Manuscripts preserved on Mount Athos, by Dr. Sp. Lambros of Athens. Dr. Foustanos of Syra, editor of *La Grèce Médicale*, also edits Ἰατρικὴ Ἱρροδοτ, a much larger journal published almost entirely in Greek.

Cornhill Magazine for November is quite up to its usual form and that is saying a great deal. The Rev. H. G. D. Latham describes the difficulties of managing a club for the class which ultimately grows into the Hooligan or possibly has already done so, but it is only by such means that the budding plant will be checked. Mr. C. W. James writes a delightful article upon "Music in Fiction." He quotes from "Henrietta Temple" Lady Bellairs's charming remark about Pasta: "She shall sing at all my parties. ..... I will try to ask her to dinner once at least. I do not like singers and tumblers at dinner." We all remember Mr. Osborne, "Lords indeed!—why at one of her swarreys I saw one of 'em speak to a dam fiddler, a fellar I despise." Lady Bellairs's language is more refined, but the beautiful high-bred sentiments are the same. We should like to remind Mr. James of another musical incident and that is in Miss Braddon's "Hostages to Fortune," where the wicked but accomplished stockbroker plays Beethoven's symphonies upon a harmonium, the C minor and the Eroica! And this on a harmonium of a date just before the Franco-German war. "The Londoner's Log Book" pursues its sparkling tenor and the whole number is a good one, the article on Newman being of special interest. Light literature which really is literary is a desideratum for hard-worked professional men and the reading of magazines like the one before us will lighten the busy practitioner's toil.

Analytical Records
FROM
THE LANCET LABORATORY.

TABLOIDS: (1) QUININE AND CAMPHOR; AND (2) QUININE, BELLADONNA, AND CAMPHOR.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, LONDON, E.C.)

THE formula of the former tabloid is as follows: quinine bisulphate one grain and camphor one-fifth of a grain; and of the latter as follows: quinine sulphate quarter of a grain, extract of belladonna one-eighth of a grain, and camphor a quarter of a grain. They are suggested as of value in the treatment of the early stages of catarrh.

AQUAFORM.

(ARTHUR AND CO., 69, BERNERS-STREET, LONDON, W.)

Aquaform is a pink, slightly fluorescent fluid with a pungent smell not unlike formaldehyde. It contains di-oxymethylene hydrate. It is stated to be a useful application for perspiring hands, giving relief to this annoying affection. We have given the preparation a trial with very encouraging results.

(1) CROWN BEER; AND (2) CROWN PILSENER.

(THE UNITED BREWERIES, LIMITED, COPENHAGEN; LONDON OFFICES, 46, QUEEN VICTORIA-STREET, LONDON, E.C.)

The special feature of these beers is the remarkably low alcoholic strength while the amount of malt nutritives is high. The analysis of Crown beer thus gave the following results: malt extractives, 8·77 per cent.; mineral matter, 0·13 per cent.; and alcohol, by weight 1·25 per cent., by volume 1·57 per cent., equal to proof spirit 2·75 per cent. The beer possesses a strong malty flavour and is only slightly effervescing. In spite of the small amount of alcohol which it contains we could find no added preservatives. The alcoholic strength only slightly exceeds that of many so-called temperance drinks, as, for example, ginger-beer. The Pilsener beer gave the following results on analysis:

malt extractives, 6·49 per cent.; mineral matter, 0·10 per cent.; and alcohol, by weight 1·75 per cent., by volume 2·20 per cent., equal to proof spirit 3·85 per cent. This is a light beer with delicate bitter flavour, and free from excess of carbonic acid gas. It was free from the usual beer preservatives. Both beers are satisfactory in composition, pure, and wholesome, containing a minimum of alcohol and a maximum of the nourishing extractives of malt.

(1) ANTISEPTIC PLASMA; AND (2) GLYCERO-PHOSPHATES.

(THE ANGLO-AMERICAN AND CONTINENTAL PHARMACEUTICAL COMPANY, LONDON, PARIS, AND NEW YORK. LONDON OFFICE: 39A, TAMWORTH-ROAD, CROYDON.)

This antiseptic plasma is a brownish, sticky substance containing well-known antiseptics. An important feature in regard to its composition is the fact that it is made up with absorbent infusorial earth (kieselguhr and kaolin) instead of the primitive clay. The plasma dressing possesses an odour of oil of wintergreen, and we found indications of boric acid. The powerful antiseptics salol and thymol are also present. The dressing presents very desirable properties, non-irritating, absorbent, and hygroscopic. The syrup of the acid glycero-phosphates (Huxley) is a clear brown fluid without deposit and keeps well. The value of such a compound acid syrup is now well recognised. The preparation is contained in a ruby glass bottle, so that light may have no deteriorating effect upon it. The preparation is agreeable to take and contains the various salts of glycerophosphic acid in approved ratio and amounts.

VARIOUS COCOAS.

(ADOLPHE SANDERS, 29, FENCHURCH-STREET, LONDON, E.C.)

Several grades of cocoas have been submitted to us from the above agency which are said to represent the best qualities of manufactured Dutch cocoas. Each and all have been so prepared as to render the cocoa more "soluble" and more easily digestible. Thus the indigestible fat has been reduced to a minimum and the cocoa ground to a finely comminuted powder which gives no sediment in the cup. Two specimens we examined were from the well-known firm of Bensdorp and Co., both proving of excellent quality, yielding a hot-water infusion of excellent flavour. The one marked "Supra" was a shade superior to that marked "Amstel." These samples are supplied by the above agent in wholesale quantities—that is, in barrels of two hundredweight each. The third sample we examined was manufactured by Messrs. Betke and Co., also a Dutch firm. This cocoa is supplied by the above agent in tins. It is of excellent character, with a pleasing aroma characteristic of high quality. The cocoas all gave evidence of treatment with a small quantity of alkaline salt—a recourse which is not objectionable, for it adds nothing injurious while it renders the cocoa more easily suspended in hot water, or "soluble" as it is wrongly called, and more digestible. Microscopical and chemical examination were alike satisfactory.

New Inventions.

IMPROVED DRESSING WAGON.

MESSRS. ARNOLD AND SONS have just completed a very serviceable and useful dressing wagon for the surgical out-patient department of the Dumfries and Galloway Royal Infirmary. This dressing wagon is specially designed for use in a surgical out-patient room, but is equally well adapted for use in a ward or private surgery; indeed, for the latter it is especially well adapted. It consists of an upper air-tight case for antiseptic dressings. The front of this case folds down and, being supported by chains on either side, forms when open a convenient tray for cutting dressings upon. The floor of the case is occupied by three drawers intended for carbolised macintoshes, coats, and towels. There are four large compartments for various antiseptic absorbent wools, and two smaller compartments for lint, gutta-percha tissue, &c. There are also five drawers, four being intended for bandages of various sizes. The fifth is divided into compartments for cylindrical rolls of gauze. Each compartment is made air-tight by a lid which has a narrow slit over the centre of each compartment through

which the gauze can be drawn and cut off to the required length. The lid is so arranged that it forms a tray upon which the cut ends of the gauze lie and they do not therefore form a hindrance to the easy running of the drawer. There is also a covered compartment in this drawer for catgut, horsehair, needles, &c. The whole is surmounted by a glass top upon which lotion-bottles, &c., stand, and below there are two glass shelves for lotion basins, instrument trays, &c.

Dumfries. GEORGE R. LIVINGSTON, M.B. Edin.

MARTINDALE'S (1) UREA APPARATUS; AND (2) BACTERIOLOGICAL FORCEPS.

FROM time to time a great many forms of apparatus have been devised for the ready estimate of urea in urine all depending upon the fact that hypobromite of soda breaks up urea into nitrogen and carbonic acid. The latter gas is absorbed by the excess of soda and the former is collected and its volume noted. The method is only approximately accurate, but it is sufficiently so for clinical purposes. Mr. Martindale (10, New Cavendish-street, W.) relies upon the measurement of water displaced by the nitrogen evolved. For this purpose he employs a generating bottle in which a measured quantity of urine (2 cubic centimetres) is discharged into 10 cubic centimetres of hypobromite by means of a pipette fitting into a tight rubber cork. The cork is fitted with an outlet (glass) tube connected with a bottle filled with water and placed at right angles with, and a few inches above, the generating bottle. The gas evolved in the generator displaces an equal volume of water which descends through a glass tube fitted into a cork into a measure glass. The principle, though simple enough, introduces more pieces of apparatus than in methods in which the nitrogen evolved is directly measured, as in the Doremus tube, and we are not sure that any greater accuracy is thereby gained. All bacteriologists working at the bench will appreciate Mr. Martindale's bacteriological forceps, which are designed to prevent stain or other reagent from drying and running off the cover-slip by capillary action. One limb of the forceps has attached to it a square (or round as the case may be) disc of metal to receive the cover-slip which is kept in position by the pressure of the other limb shaped like a bent end of forceps. These forceps also obviate the need to continually dry the limbs of the instrument during the process of staining or washing.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 16, 1901.

The Annual Meeting of the Royal College of Surgeons of England.

ON Thursday, Nov. 21st, the Council of the Royal College of Surgeons of England will render to the assembled Fellows and Members an account of their stewardship for the past academical year. All the work that the Council has done has been done well, and we may cordially express our thorough approval of their management as recorded in their report. It is not, however, with what they have done that we are now concerned, it is rather with what they have left undone. They have made no attempt to give representation on the Council to the Members of the College. Ever since these annual meetings of Fellows and Members were established some 17 years ago resolutions have been carried time after time to the effect that it is desirable to extend the franchise to the Members, yet the Council has done nothing. On one occasion, it is true, they took the opinion of the Fellows on the subject; yet, since only one half of the Fellows replied to the circular from the Council, the adverse opinion then expressed cannot be seriously taken as representative of the real wish of the holders of the Fellowship. Moreover, five years have elapsed since that vote was taken; surely, then, it is fully time to endeavour to ascertain once more what the Fellows think on this most important subject. For important it, indeed, is. The rights of nearly 20,000 Members are absolutely ignored; in no way are they represented on the Council. No references to the Charter, no appeal to the desirability of representation on the Council being confined to the more highly-educated Fellow, can be of any avail in this discussion. It is of the Charter itself that we complain, for it excludes from the government of the College those who form nine-tenths of the body corporate. The Members from their very position as Members must form part of the College, and therefore should be directly represented on the Council. They are not merely Licentiates, they are Members of the Royal College of Surgeons of England. Nearly 60 years have passed since the injustice inflicted by the Charter of 1843 first arose, and ever since that year the Members have striven, sometimes in one way and sometimes in another, to obtain redress for the ills of which they complain, but hitherto in vain. The annual meeting is the only occasion when they can publicly bring forward their claims and these just claims cannot be for ever ignored. A motion urging the importance of this extension of the franchise forms the first agendum at the approaching meeting. It invites the Council to suggest any way in which the Members of the College may be represented on the Council. This motion is to be brought forward by Dr. THOMAS MORTON, and all who have heard him speak at previous annual meetings of the College know that all he says will be said justly and moderately. But some other speakers at this meeting are prone to forget that argument is the most likely means of convincing the Council. We would therefore urge on the Members the importance of moderation in the manner in which they speak at the annual meeting. The time has gone by for violent declamation and perfervid oratory; it cannot advance the cause of Members and it may tend to retard it. Many of the Fellows are keenly in favour of the just claims of the Members and would do much to support them. The Council itself is also changing. As the years go by the *personnel* of the Council alters; the older, more conservative members of that body retire therefrom and are replaced by younger men, more alive to the needs of the times; indeed, we have reason to know that a large proportion of the Council itself is willing, if not anxious, to support any reasonable scheme of representation of the Members. The present time is exceedingly suitable for bringing forward the matter, for we are on the eve of an election of Direct Representatives on the General Medical Council. Nearly everyone agrees that the present number of Direct Representatives is too small. Were, however, the representative of the Royal College of Surgeons of England on that Council elected by the Members he would represent many thousand medical men, so that, in fact, he would be equivalent to a fourth Direct Representative. Mr. BRINDLEY JAMES is bringing forward a motion suggesting that the Representative of the College on the General Medical Council should be chosen by the Fellows and Members of the College of over 10 years' standing. We must confess that we fail to see the object of thus limiting the Members who might vote on this matter, but perhaps the mover of this motion considers that it is more likely to be acceptable to the Council if the voting power is confined to the senior Members.

We have so often on previous occasions supported the claims of the Members that it would be superfluous to recapitulate all that may be said in their favour. We may, however, mention that until the Council of the College has on it those who are the representatives of the general practitioners the Council will fail to appreciate the importance of many questions which have a vital interest for those in general practice. It is impossible, or well-nigh impossible, for a surgeon who has always practised as a consultant to appreciate the daily difficulties and the daily trials of the general practitioner. Nowadays, with the intense competition which exists both from medical aid associations and from prescribing druggists, the struggle for existence is very keen, and much assistance might be vouchsafed to medical men by the timely succour of the Council of the College. The voice of so august a body is heard respectfully even by those in high authority, and were the Council earnestly to take in hand the subject of medical reform we might hope to see progress in medical legislation such as has never been seen before.

Scarlet Fever and Milk.

THE London County Council have just issued a report by their medical officer which presents several points of considerable interest upon which we propose to comment. The report

deals with an outbreak of scarlet fever in London during May of the present year, which occurred for the most part in Shoreditch and Bethnal Green, other districts—e.g., Finsbury, St. Pancras, and Islington—being in a less degree involved. An increase in the number of cases of scarlet fever notified was first observed in Shoreditch by Dr. L. T. F. BRYETT who, on May 1st, informed Mr. SHIRLEY MURPHY of the fact, and also that he had found that the persons affected had derived their milk-supply from two local vendors, one in Shoreditch and the other in Bethnal Green, the adjoining district. He had also ascertained from Dr. G. P. BATE that there was a simultaneous increase in the number of cases of scarlet fever in Bethnal Green which had been supplied with milk from the vendor in that district, and that while the Shoreditch vendor had derived his supplies from two middlemen the Bethnal Green vendor had received his supply from one of the two. Obviously the supplies of the middleman who had sent milk to both these vendors was under suspicion. At this point the administration of the London County Council took up the inquiry while the medical officers of health of the districts involved continued to trace the source of the milk-supply of every person attacked with scarlet fever and placed this information at the disposal of the Council's medical officer.

The middleman whose milk thus came under suspicion furnished a list of over 40 farms from which he received his milk. Dr. W. H. HAMER prosecuted inquiries among the local vendors who it was ascertained had supplied milk to the infected persons, and every effort was made to learn from the middleman's van-men from which farms they had received their milk. Further letters were sent to the medical officers of health of the areas in which the farms were situated from which milk came to the middleman, and on May 3rd the evidence had so far accumulated that two farms in Staffordshire had come especially under suspicion. Dr HAMER, therefore, on May 4th proceeded to Staffordshire and while there Mr. SHIRLEY MURPHY was able to telegraph to him that he had received information of the occurrence of illness resembling scarlet fever in the family of one of these farmers, a suspicion which was later confirmed. Mr. SHIRLEY MURPHY had moreover, on the morning of May 4th, informed the middleman that the supply of milk from this farm should be stopped. Thus in 72 hours a complex problem had been practically solved by methods much resembling those of Mr. SHERLOCK HOLMES, and all that remained was to study the results of the stoppage of milk from the infected source. The report before us gives full information of the summary arrest of the development of scarlet fever in the districts involved and of the evidence which showed that a correct conclusion had been arrived at as to the original source of the mischief. The report also contains matter of much practical interest in connexion with the distribution of an infected milk-supply in London. The most important point which is brought out is that the middleman had no records which would enable him to give information as to how the milk from his several farms had been distributed among the local vendors. Hence the memory of his van-men had to be relied upon and this does not appear to have been invariably trustworthy. The consumers, of course, had no knowledge as to the sources of supply, the local vendors generally were satisfied with knowledge which was practically not more precise, and the middleman himself had no exact knowledge as to how the milk from his various sources was distributed. Hence, when the milk of a particular farm acquired infective properties there were no means of ascertaining which farm it was that was involved, and while the evidence was being analysed infective milk was being distributed, and as a result some 300 persons were attacked with scarlet fever. Clearly this is a possibility which ought to be prevented in the future, even if it causes some inconvenience to the milk trade. It ought to be possible for each local vendor to know from what source his supply is derived so that that supply can be eliminated if it is found to be causing disease among the consumers. The fact that the farm from which the infective milk was received was detected so early in the outbreak with which this report deals may, of course, be used as an argument on the other side, but it cannot always be depended upon that future inquiries will be conducted as expeditiously as they were in the case which we are discussing; and even the May outbreak would probably have ceased a day or two earlier had it been possible—as it ought to have been if the information had been available—to stop the supply of the infective milk at an earlier period.

There are other points in which the London Public Health Act requires amendment. It is, for example, patently absurd that it should not be contrary to law to supply a particular milk in other districts when its supply has been stopped in one district. Some better machinery for excluding infective milk from London is obviously needed, and this, it may be hoped, will at no distant date be provided. An interesting diagram in the report shows the sex- and age-distribution of the persons attacked during this outbreak. Males and females were attacked much as they are at ordinary times, but persons aged from 15 years and upwards were in this outbreak attacked in undue proportion, suggesting that when infection is received in a food-supply many persons suffer who in the ordinary course of life escape. This is not matter for surprise.

The Medical Profession and the Public Vaccinator.

WE have thought it right to give a hearing several times during the recent recrudescence of small-pox in London to communications upon the subject of the relations which should exist between the medical profession and the public vaccinator. Undoubtedly there has been a growing feeling on the part of the general practitioners of the country that the public vaccinators have made a zealous discharge of their official duties resemble to a disagreeable degree the process of poaching upon the patients of their professional brethren. If no one has said quite so much as this, the feeling that is thus described has been present in the minds of our correspondents. This week we publish two letters on the subject which are only specimens of many that have reached us, and which bring the matter up for discussion in a convenient form because they formulate a distinct charge against the public vaccinators as a body. The charge is that a proclamation issued by the organising secretary of the Association of Public Vaccinators for

England and Wales to the public through the medium of the press is unprofessional in character.

The following is the proclamation in question :—

In view of the fact that considerable misapprehension exists in regard to revaccination, the organising secretary of the Association of Public Vaccinators for England and Wales writes to inform the public :—

1. That every person in England and Wales is entitled to demand revaccination at his own house, free of charge, at the hands of the public vaccinator of his district, provided that such person has not been vaccinated or revaccinated within 10 years preceding the date of his demand.

2. That the name and address of the public vaccinators for each district in England and Wales can be obtained from the clerk to the guardians and from the registrars of births and deaths.

3. That public vaccinators are the only medical men who are compelled to use the safeguards prescribed by the regulations of the Local Government Board, and that they are the only persons who can obtain the pure glycerinated calf lymph prepared in the laboratories of the Local Government Board, and that they are compelled to use that lymph in all cases of vaccination and revaccination in their own district.

It is with regard to the third clause of this proclamation that we have received indignant letters of protest. A large number of our readers consider that it amounts to a thinly-disguised attempt on the part of the public vaccinators to detach patients from their professional brethren. The assertion that the public vaccinators are the only medical men who are compelled to use the safeguards prescribed by the regulations of the Local Government Board almost amounts, in their opinion—and we see very clearly their side of the matter—to the insinuation that the general practitioners of the country are not able to take proper precautions to secure safe and efficient vaccination. Similarly, the statement that the public vaccinators are the only persons who can obtain the pure glycerinated calf lymph prepared in the laboratories of the Local Government Board throws a doubt by implication upon the quality of the lymph used by operators not holding an official appointment. The circular, in short, while pointing out to the public the ease with which the public vaccinators can vaccinate all persons resident within their district, makes claim for them that they are the only persons who can perform the little operation satisfactorily, being the only persons who possess the proper lymph with which to make inoculations. If these claims are not made in set terms it is certain that these are the only deductions that the public is likely to draw after reading the circular. And everyone knows that these deductions are entirely false. It is true that the public vaccinators are the only persons who can obtain the Local Government Board lymph, but the Local Government Board lymph is not the only efficacious lymph that can be obtained. It is obviously absurd to suppose that vaccine lymph can only be properly prepared in a laboratory rented by the Local Government Board and by a bacteriologist employed by the same body. Indeed, we have shown that this is not the case. THE LANCET Special Commission on Glycerinated Calf Vaccine Lymphs reported last year[1] upon the quality of thirteen lymphs then on the market, when the Local Government Board lymph was found to occupy a middle place. It was freer from extraneous matter than were six brands, but it did not answer quite so favourably to tests as six other brands did—all, however, were found to be absolutely pure of pathogenic organisms. That is to say, that, unless the Local Government Board lymph has improved during the last eighteen months more than the other brands of lymph have improved, the monopoly enjoyed by the public vaccinators in the acquisition of the lymph gives them, as we should expect, no particular advantage.

The Association of Public Vaccinators for England and Wales must qualify or withdraw their notice to the public if they desire to receive the support of their professional brethren. We are not blind to the difficulties with which public vaccinators have to contend. Their posts are not enviable ones: they are not well paid, and, in certain districts, they are not worth having. The public vaccinators and vaccination officers form the executive of the Government upon whom, to a certain extent, the responsibility of seeing that their districts are kept properly vaccinated devolves. The vaccination officers are right to issue instructions to the public urging upon the public the necessity of being vaccinated and pointing out the way in which this result can be secured. But such notices should not be carelessly worded. We have grave doubts whether the proclamation in question will be countenanced by many public vaccinators who are themselves in medical practice and realise to the full the importance of adhering strictly to medical etiquette in all dealings with their colleagues, while they must see that the emoluments and considerations that they enjoy as Government officials are due to the fact that they are medical men. Anything which tends to persuade patients who are perfectly well able to pay for the small operation of vaccination to present themselves at the offices of the public vaccinator so as to have the operation performed gratuitously is to be regretted. The medical profession does too much work for no pecuniary return, while the public has in many directions shown itself to be without conscience in obtaining medical service gratis wherever it can be secured. The fact that it is open to any man, whatever his status or occupation, to be vaccinated for nothing by the public vaccinator is not one that requires to be brought home to the mass of the public at all. They may be trusted to find out such things for themselves. This, however, is not the more serious side of the circular. The serious side is the insinuation that the public vaccinators possess qualifications and opportunities for performing an efficacious operation which are not possessed by their professional brethren, the general practitioners. This false suggestion may not have been intentional. We will go further and say we are sure that it was not intentional, but it is there. No one can read the circular without seeing that it is there, and many hundreds of general practitioners have read the circular and have been disgusted with it because of the slur upon them which they cannot help reading into its words. The matter is now so serious that we think another circular should appear correcting the impressions of the first one, and stating in the clearest possible terms that there is no reason whatever to suppose that the public vaccinators can vaccinate the public better than can other medical men. The public vaccinators will treble the difficulty of their already difficult position if they divorce from themselves the sympathy of their medical colleagues, especially in districts where the public is not too well

[1] THE LANCET, April 28th, 1900, p. 1227.

inclined towards them. From motives of sheer policy, if not of right feeling, the offending third clause of the circular of the organising secretary of the Association of Public Vaccinators for England and Wales should at once be recast or, better still, withdrawn.

Annotations.

"Ne quid nimis."

THE ARBITRATION IN THE POTTERY TRADE.

LORD JAMES OF HEREFORD, the umpire in this case, has brought the proceedings to an abrupt termination by declaring that as it was shown that lead-poisoning had greatly decreased under the last rules there was no need to impose fresh ones, at all events for the present, as to the use of fritted lead or as to the examination of adults. These questions, he added, might be postponed for 18 months, and would be then again postponed if necessary. Was ever such a ridiculous situation created in the teeth of the laborious inquiries and reports undertaken by the Government's chosen experts, Dr. T. Oliver and Dr. T. E. Thorpe, in which the one clear recommendation standing out before all others was the adoption of definitely fritted lead. We learn that this decision has given general satisfaction locally—that is, in the pottery district at Hanley. We wonder whether this satisfaction is shared equally by the workers and their masters. We view the decision with the deepest dismay; it is premature and dangerous.

PNEUMOTHORAX FROM PARACENTESIS THORACIS.

PNEUMOTHORAX is a rare result of paracentesis thoracis. At the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 11th Dr. Variot and M. Pierre Roy related the following case. A girl, aged 11 years, was admitted to the Hôpital des Enfants-Malades on May 29th. She was said to have had pneumonia in March and a relapse in April. After this she had a cough and pain in the side, expectorated some mucus, and lost about five pounds. Over the lower two-thirds of the right lung behind vocal fremitus was absent, dulness was well marked, and the vesicular murmur was almost abolished. At the level of the spine of the scapula slight bronchial breathing was heard. The apex of the lung was normally resonant. The temperature was normal. There was evidently a slight pleural effusion, probably serous. Counter-irritation and the administration of squills proved useless. On June 17th two exploratory punctures with a Pravaz syringe were made in the seventh and eighth intercostal spaces without result. Nevertheless paracentesis was performed. The patient was placed in the dorsal decubitus position and the fine needle of Potain's instrument was inserted in the seventh intercostal space in the axillary line. Serous fluid flowed slowly into the bottle and was mixed from the first with air bubbles. It was certain that no air was entering by any of the tubes. The liquid flowed so slowly that in three or four minutes only 120 grammes were discharged. The child was then seized with persistent cough, and the needle was rapidly withdrawn and the opening was closed with collodion. There was no trace of blood at any time in the fluid. After the needle was withdrawn the coughing instead of stopping increased. Soon the child expelled by the mouth and nose a large quantity of sanguineous serous fluid which was a little frothy. At the same time the face became cyanosed and the pulse thready. Instant asphyxia was feared. The child complained of acute pain in the right side and cried out that she was being stifled. Under subcutaneous injection of ether, inhalation of oxygen, and a sinapism applied to the back the symptoms diminished. The expectoration, however, continued, and in a quarter of an hour the child had expelled 250 grammes of frothy sanguineous liquid. On auscultating the chest behind, over the position formerly occupied by the effusion, amphoric breathing was heard and the cough had an amphoric character. The percussion note here was tympanitic. A quarter of an hour after the paracentesis the child was quiet. Half an hour later fits of coughing reappeared with the same sero-sanguineous expectoration. They were assuaged by the sucking of ice and a hypodermic injection of morphine (one-seventh of a grain). In the evening she was comfortable, but the temperature was 104° F., and every time she moved she coughed; in the afternoon she had expelled about 250 grammes of the fluid. On June 18th the temperature was normal; about 190 grammes of the fluid were expelled. On June 19th the cough had disappeared. In the right infraspinous region amphoric breathing persisted, but in the upper part vesicular breathing was heard. Percussion seemed to show a small quantity of fluid in the pleural cavity, but a succussion sound could not be obtained. On the following days large mucous râles were heard in front on the right side and there was slightly fœtid muco-purulent expectoration with fœtor of the breath. On July 10th amphoric breathing was heard with difficulty. She was sent to a convalescent home. On August 26th sonorous râles were heard in both lungs. There was dulness of the lower two-thirds of the right chest with slight diminution of the vesicular murmur. On Sept. 4th there was some dulness of the lower third, and inspiration here was harsh and expiration slightly bronchial. In this case partial pneumothorax was evidently produced by the paracentesis. Dr. Variot and M. Roy insisted that the lung was not punctured by the needle, for not a drop of blood escaped with the aspirated fluid. The fact that 120 grammes of fluid were removed shows that the external air was not admitted to the pleural cavity. They think that in the region of the pleurisy the lung tissue was diseased and fragile and was torn under the influence of the aspiration, perhaps by the strain on a pleural adhesion. The expectoration was evidently due to the passage of the pleural effusion through the pleuro-pulmonary fistula so formed.

THE COAL SMOKE ABATEMENT SOCIETY.

As we announced last week, a public meeting will be held in support of the objects of this society at Grosvenor House on Wednesday next, Nov. 20th. The following motions will be submitted to the meeting:—

1. That the pollution of the air by coal smoke is an evil injurious to public health and that every effort should be made to secure the laws existing for its prevention being kept in effective operation.
2. That the rapid deterioration of works of art and vegetation in London due to the effects of coal smoke demands an immediate and comprehensive remedy.
3. That the darkness and impurity caused by smoke pollution have a directly demoralising effect upon the inhabitants of a great city.
4. That as a matter of private and public economy the escape of smoke from coal fires is a preventable waste of energy and material.
5. That this meeting, in recognising the practical results already achieved by the Coal Smoke Abatement Society with the limited resources at its disposal, and in approving its line of action, pledges itself to use its best endeavours to place it in a position to extend its operations.

We are not sure how far pollution of the atmosphere by coal smoke has played a determining part in the dense fog that enshrouded London during the first week of November. Probably no two experts would give exactly the same opinion as to the influence that it played, but certainly no one can doubt that its share was considerable. An acute remembrance of the miseries of that week should be present in the minds of all those who attend the public meeting, which we trust will be a large one, and should impel them not only to pass the motions with acclaim but to work with the Coal Smoke Abatement Society in finding

a remedy for them. The excellent society, over which Sir William Richmond presides, is a remarkably alert and active one. It has received but small support either from the public or the medical profession and deserves much wider notice and much more generous help. Medical men have many ways, perhaps more strictly medical in their direction, of getting rid of their spare guineas, but this society is one that would appeal with particular force to the lay mind if the therapeutic nature of its work were understood. We wish all our London readers would impress upon their patients the fact that to abate coal smoke in the metropolis is to improve the public health of the city in a marked manner.

THE PHYSIOLOGY OF MARCHING.

"THE Physiology of Marching" is the title of an essay by Herr N. Zuntz and Herr Schumburg recently published in Berlin by Hirschwald and abstracted in the *Centralblatt für die Medicinischen Wissenschaften* for October. Their investigations, which have been carried on for some years, were undertaken to ascertain the limits of weight that a soldier on the march could advantageously carry. They experimented on five healthy students who had already seen service and who for a long period marched fully equipped about 15½ miles daily. Amongst the more important points noted were that sphygmograms taken before, during, and after the march showed that the increased work of the heart consequent upon the muscular exertion prolonged the systole of the heart and the ascending line of the pulse curve at the cost of the diastole—an effect that was distinctly visible after a march of only 12 miles. This prolongation of the systole rose with the amount of weight carried to such a degree that when the beats of the heart were between 140 and 150 per minute the duration of the systole was to that of the diastole as 1 is to 1. So that the period of the rest of the heart became constantly less, indicating a not inconsiderable degree of increase in the work of the heart. An increase of the regulation weight carried by German soldiers from the ordinary amount of 48·4 pounds to 59·4 pounds produced the same effect, whilst when the weight was raised to 78·4 pounds the danger of seriously injuring the heart was greatly increased as shown by a fall of the blood-pressure and of the arterial tension. Simultaneously an acute dilatation of the heart, recognisable by percussion, and enlargement of the liver in consequence of blood stasis and accumulation of blood in that organ were observable. As a result of the dyspnœa from exertion the driving force of the heart became still further reduced, the volume of blood propelled into the arteries was diminished, and the blood in the great veins re-entered the heart in smaller quantity and more slowly. In healthy persons the dilatation of the heart gradually disappears and in the course of two or three hours the normal conditions are restored. Speaking generally the number of red corpuscles and the specific gravity of the blood increased during the march owing to the great loss of fluid by the lungs and skin. The frequency of the respirations was increased whilst marching, though after a short rest the number returned to the normal. The vital capacity was diminished. The heat of the body increased on the march, sometimes to quite a remarkable extent and even though the weight increased and there was more or less physical exhaustion. In one case it amounted to 40° C. (104° F.) and more. In order to determine the consumption of food and the nature and quantity of the excreta the diet was kept as uniform as possible. It appeared, to the great surprise of the experimenters, that notwithstanding the abundant secretion of sweat the urine on marching days was more abundant and of less specific gravity than on the days when rest was taken. Albumin, indicated by a precipitate on boiling, was rarely present and then only for a brief period. The nitrogen-containing substances were just the same on the days of rest and of marching, so that there was no increase of metabolism in the albumin of the body, nor was the composition of the contents of the intestine materially different on days of work and days of rest. Subsequent sections of the essay deal with the exchange of gases during work and while at rest, as well as the heat value of the work done. 70 per cent. of the heat generated is carried off by the sweat and the greater the amount of heat produced by work the more abundant is the secretion of sweat, but many factors have to be considered, as the temperature and degree of moisture of the air, the velocity of the wind, and exposure to the sun. As the men became more "trained" by exercise the amount of sweat diminished.

THE HOSPITALS AT ATHENS.

IN the *Phonographic Record* for October Dr. G. F. Atchley (consulting surgeon to the Bristol General Hospital) gives an interesting account of a visit he recently made to the hospitals at Athens. The children's hospital, about two and a half miles outside the city, "consists of one large ward containing 16 to 18 beds with a small isolation ward and nurses' rooms. The original design contemplated six of these pavilions, but, as usual, want of funds has hitherto prevented further building. The situation is perfect; abundance of room for any possible extension or for playgrounds. The building has been 'scamped,' the tiled floors are all going to pieces, the windows do not fit, and generally the work has been done in a very inferior manner. I understand that more care will be taken in future to secure better work. A large number of patients were in bed with various forms of tubercle, especially tubercular peritonitis. The nurses were all English. It is found very difficult to get Greek nurses to stay; they all want to be nearer Athens. ..... At present any cases which require operation are sent to the Evangelismos Hospital, where the facilities for operating are almost perfect. The Evangelismos is a large general hospital for over 200 patients and having both medical and surgical sides. Here I found everything in the highest state of efficiency. The practical part of medicine and surgery was up to date and in some respects even in advance of our best English hospitals." Dr. Atchley saw Dr. Tsakonas operate on a boy with stone and on a woman with ovarian tumour. "The operation chosen for the calculus was suprapubic. It was most successfully carried out, the wound in the bladder being stitched with catgut (continuous suture) and the outer wound being treated in the same manner." For the removal of the ovarian tumour "a new method of anæsthesia was used. ..... A needle, made especially for the purpose and like a long hypodermic needle, was connected with a syringe and inserted opposite the second lumbar vertebra just outside the backbone. It was made to penetrate the spinal canal and only a little cerebro-spinal fluid escaped. Then cocaine was injected. In about 20 minutes anæsthesia was produced over the whole lower half of the body below the umbilicus. Although in this instance not quite enough cocaine had been used and a little chloroform became necessary, Dr. Tsakonas told me that he had used it in 163 cases without a single accident. Usually the anæsthesia is complete. The patient remains perfectly conscious all the time of the operation and there are positively no after-symptoms whatever. The practical difficulty seems to be to ascertain exactly the amount of cocaine which should be allowed to enter into the spinal canal. Probably eucaine or one of the similar compounds would be less likely to be injurious should an overdose be injected. It has now become a customary practice in this hospital and

further experience will doubtless be attended with increased accuracy as to the dose as well as the method of introduction. The two tumours were removed with great skill and the sutures used were again continuous. First, the peritoneum was hemmed, then the musculo-fibrous covering, and, lastly, the skin, all with one thread. A single large suture tied the skin and fascia together in the middle of the wound. Collodion was painted over all, an antiseptic dressing applied, and a bandage completed the proceeding. It seems that here all these wounds heal up by first intention and are never followed by secondary trouble. The greatest precautions are taken against the introduction of germs. On entering the theatre I was, in common with all those present (about 20 in number), covered with a sterilised waterproof cloak and sleeves; the air had been also sterilised and, of course, all instruments. No sponges are used, but sterilised pieces of calico like small pocket-handkerchiefs, and each of these when used was clipped by the catch-forceps. I subsequently went over the whole hospital under the guidance of one of the resident surgeons and was delighted and somewhat surprised at its very advanced and scientific management. ..... Greek nurses are here to be found and from what I saw were very well trained." Dr. Atchley also visited the military hospital, nursed by English nurses. This he found to be very efficient but not so up-to-date as the one just described.

HOMO VERMIGENES.

THE *Daily Express* of Nov. 4th publishes the kind of *ad captandum* illustration that appeals to the great mass of newspaper readers still in the habit of regarding science, and especially the Darwinian theory, in the light of unpleasant paradox. The picture in question represents the "ladder of evolution," and this, with accompanying letter-press, is headed "How a Flat Worm became a Man." Professor Ernst Haeckel of Jena is thus pictorically represented as tracing the descent of man from the flat worm through the eel, the iguana, and, *longo intervallo*, the opossum, the stenops, and such apes as the gibbon and the semnopithecus. From the point of view of embryology this theory is, of course, ancient, for as long ago as 1704 we find Geoffroy, a learned Parisian doctor and member of our own Royal Society, maintaining a thesis which, at first sight, seems a distinct adumbration of Haeckel's view. The French title of the thesis, as translated by Nicolas Andry from the Latin, is "*Si l'Homme tire son Origine d'un Ver?*" Geoffroy seems to have been familiar with the microscopical investigations of Leuwenhoeck, published some 20 years earlier, and though he does not actually refer to the Dutch histologist's "animalcule" in human semen, yet his "worm" is practically the same thing. The spermatozoon does not seem to have been detected till a much later period, yet Geoffroy had certainly got in a fanciful way to the root of the matter. Man, he maintains, springs from a minute worm, which, issuing from the male, unites with the ovum of the female, thus originating the human embryo. Throughout his treatise he insists that the processes of fertilisation, gestation, &c., are the same throughout the animal world. Man, according to him, reproduces exactly as do other viviparous animals. Indeed, his views come so near what would in his day have been considered grave heterodoxy that he must certainly rank as an important pioneer of the modern doctrine of evolution.

PRECOCIOUS MATERNITY.

IN the October number of the *Maryland Medical Journal* Dr. L. M. Allen, Associate Professor of Obstetrics in the University of Maryland, describes a case in a coloured girl, aged 11 years, who was when in the seventh month of pregnancy admitted into the Free Lying-in Hospital of the university. She had the appearance and characteristics of a child of 11 years, was fond of playing with dolls and of childish amusements, and was four feet five inches in height; there was no evidence of rickets or any other disease. Menstruation first began, as far as could be ascertained, at the age of 10 years and three months, and had been regular. The pelvic measurements were as follows in centimetres: interspinous, 22; intercristal, 21·5; right external oblique, 18·5; left external oblique, 18·5; external conjugate, 14·25; circumference, 77; distance between trochanters, 28·25; diagonal conjugate, 8·5; and conjugata vera, 6·5. The fœtal heart was heard with maximum intensity in the left lower uterine quadrant. The pregnancy advanced to full term and labour began at the expected time. After the labour had lasted about 14 hours the patient was put upon the examining table, and while the resident physician was preparing to make an examination the child was born. After half an hour the placenta was delivered artificially. A normal amount of blood was lost. The patient made a rapid and uneventful recovery. The infant was well developed in every respect, and when sent away to an orphan asylum on the sixteenth day was in very good condition. It weighed seven pounds two ounces. The measurements of the head were as follows in centimetres: occipito-mental, 12·6; occipito-frontal, 11·2; suboccipito-bregmatic, 10; biparietal, 8; bitemporal, 7·2; circumference of head, 32. Points of interest in the case were the extremely easy labour with a very small pelvis and the comparative absence of pain. During the whole labour hardly a sound was uttered by the patient, even during the passage of the head and shoulders over the perineum. At the time of conception the mother was about 10 years and 11 months old, and when the child was born her age was 11 years and eight months.

THE WHEAT PROBLEM.

AN investigation of great interest, which is likely to render valuable service to those engaged in the management of crops, has been undertaken by Bernard Dyer, D.Sc., F.I.C., the results having recently been published in the Philosophical Transactions of the Royal Society. Some years ago Dr. Dyer communicated an interesting paper to the Chemical Society in which he proposed the use of a 1 per cent. solution of citric acid as a means of approximately differentiating by the application of chemical analysis between the total and the probably available phosphoric acid and potash in soils. The citric acid method was the result of an attempt to imitate in the solvent used the acidity of root sap based on a preliminary examination of the root acidity of 100 specimens of flowering plants representing some 20 natural orders. There is no doubt that this method has brought valuable results to light. It has been applied to 22 samples of soil drawn from various plots on which barley under very various manurial conditions had been continuously grown for over 40 years. The results were of sufficient interest to lead to the undertaking of a similar but much more extended examination of the soils of Rothamsted in what is known as the Broadbalk field. These plots have been continuously under wheat now for considerably more than 50 years. The manurial history of each plot and its yearly yield of grain and straw are all on record and periodical analyses of the ashes of each year's crop from most of the plots have been completed sufficiently to allow of an estimate of the yearly removal of both phosphoric acid and potash. The soil of each plot was sampled in 1865 and in 1881, as well as in 1893, the three sets of samples representing not only the surface soil (the first nine inches) but also the second and third depths, each again to the extent of nine inches. These samples were placed by the late Sir John

Bennet Lawes and Sir Henry Gilbert at the disposal of Dr. Dyer for the determination of the total phosphoric acid and of the potash soluble in strong mineral acid, but more particularly for the further investigation of the citric acid process which was calculated to give a better insight into the fertilising value of various soils at various periods of their history and at various depths. The results are, of course, of scientific interest, but they are of practical value also as throwing a light upon one of the most important questions to the community—namely, the successful raising of food upon the land. When examined by this citric acid method certain of the soils showed differences which can be traced to variations in manurial treatment more than 40 years previously. In regard to phosphoric acid it is shown that by far the greater portion of the unconsumed phosphoric acid added in manure is accumulated in the surface soil, although most of the phosphoric acid had been originally soluble in water and its application had extended over 50 years. In the case of dung, however, there is a considerable descent into the second and third (nine-inch) layers. In the case of superphosphate there is evidence of a descent into the second, and even the third, nine-inch layers. In chemically manured plots the greater part of the calculated accumulation of phosphoric acid is found by analysis in the surface soil, and a large proportion of it proves to be soluble in weak citric acid. The citric acid method thus enables an evaluation of the soil to be made at different depths, which is of the greatest importance in connexion with the problems of root-range and subsoil feeding. The results obtained by the use of weak citric acid in the case of potash are similarly strikingly instructive and consistent, showing that the largest accumulation of manurial potash is in the surface soil, but that a very large proportion is also found in the second layer (nine inches) and even in the third layer. Dr. Dyer remarks that it would seem, on the whole, probable that when a soil in the surface depth contains as much as 0·01 per cent. of potash soluble in weak citric acid the special application of potassium salts, at any rate as far as cereals are concerned, is not needed. Dr. Dyer may be congratulated on the interesting results which he has brought to light by the application of a method which he suggested, representing as far as possible the conditions under which the plant gains nourishment from the soil. The more actively and practically the great question of fertilising the soil is approached the less will apprehension be felt as to the future wheat-supply of the world in spite of Sir William Crookes's well-known predictions as to the possibility of a nitrogen-famished soil.

RACIAL LONGEVITY AND LIFE INSURANCE.

THE statistics collected for American life insurance companies admit of comparisons which are not needed for the British insurance business. However divergent in origin, the British people have become sufficiently alike for the purpose of life insurance. In the United States, on the contrary, so large a proportion of the population have recently come from Europe that the question of original nationality is still a matter of practical importance. An English insurance company would not ask an applicant whether he was a Dane, a Saxon, a Briton, a Roman, or the descendant of a Huguenot refugee, and most persons would find it very difficult to answer such a question. In the United States, on the contrary, life insurance is founded on the longevity of the people of various countries and States. Statistics have shown that the Norwegians and Swedes have the longest lives. This is attributed not only to their general good physique but more especially to their freedom from digestive troubles. Mr. John F. Dryden, President of the Prudential Life Insurance Company of New Jersey, finds that the people who may be qualified as genuine Americans have the longest life after the Swedes and Norwegians. Mr. Frederick L. Hoffman, the chief insurance statistician of America, states that the death-rate of persons under 20 years, and especially young children, is greater in the United States than in most European countries; but that after middle-age Americans live longer. He further claims that in spite of excesses committed in large towns people, as a whole, live a more temperate life in New England than in Old England. It is stated by these statisticians that out of every 10,000 children born in each of the four following States 7551 will live to the age of at least 20 years in Sweden, 7201 in England, 7167 in Massachusetts, and only 5413 in Spain. The number that reach the age of 50 years, out of 10,000 born, are 6043 in Sweden, 5405 in England, 5275 in Massachusetts, and 3765 in Spain. The proportion in 10,000 attaining the age of 75 years is 2948 in Sweden, 2042 in Massachusetts, 1786 in England and Wales, and only 997 in Spain. It is claimed that sanitation generally has been much improved in America, that there is a wider diffusion of prosperity, and that the American people are made up of the best elements of the white races and that therefore the proportion of those who live beyond 50 years is greater. On the other hand, these conditions have not influenced favourably the negro race. Though they should be acclimatised—for the negro race has now inhabited America for some 200 years—the negro death-rate has nevertheless greatly increased, especially since the abolition of slavery. The fact is, that there is now less restraint on his tendency to debauchery and that the negro displays the most complete disregard for sanitary precautions. Perhaps these are but the first results of the emancipation of the slave; with time and the better spread of education he may mend his ways.

MEDICAL PLAYS ON THE FRENCH STAGE.

FOR some years past the modern stage has given more and more room to medicine in the subjects of which it treats. One or more medical men were often among the *dramatis personæ*, although as a rule they only played a secondary part. But to-day when authors are always on the look-out for original subjects and make the stage a pulpit from which they can preach with dramatic effect various theories dealing with human or economic sociology the leading character is a medical man or the whole point of the play turns upon some medical question. Soon after the extraordinary effect produced by Ibsen's *Revenants*, which treated of the influence of heredity, M. Brieux dealt with the same subject in his play *L'Evasion*, where he upheld the thesis, one not very strongly borne out from a scientific point of view, that the modern view which looks upon heredity as a sort of moral and physical prison from which the individual can never escape is false, and that the will, aided by some powerful motive such as love, is sufficient to extricate the individual from his cell. Then came other plays, such as *En Paix*,[1] which dealt with the French Lunacy Law and *Les Remplaçantes* which showed the beauty of a mother suckling her child as against the vice of handing it over to a hired wet-nurse. Only recently three new medical plays came out, two of which have been produced while the third was interdicted by the censor. One called *Le Bâillon* centres in the question of professional secrecy. A young girl suffering from tuberculosis is betrothed to a young man who asks her physician, Dr. A., as to her condition. Dr. A. refuses to give him any answer, as to do so would be a breach of professional confidence. The parties are married and later, when the disease has far advanced, a specialist, Dr. B., is called in who reproaches Dr. A. with not having prevented the marriage. Dr. A. repeats his argument and points out that Dr. B. has

[1] THE LANCET, Jan. 26th, 1901, p. 204.

himself written a book in which he upheld the theory that nothing whatever could justify a breach of professional confidence. So the play ends leaving the audience face to face with a difficulty which has been presented to them in the most forcible manner. The second play is a comedy the scene of which is laid in a little village. A girl who has been jilted by her lover suddenly falls into a state of lethargy. The lover to his great regret is forced to support the girl while in this condition. Little by little, however, the story of the sleeping girl gets wind and the village is thronged with curious visitors and committees of scientific inquirers. Thereupon the lover has the brilliant idea of making everybody pay a small fee to see the girl, when all of a sudden she wakes up quite well. But the lover begs her to keep up her slumber so that no one will lose the monetary advantages brought both to themselves and the villagers by the host of visitors. So she sleeps every weekday and wakes up on Sundays, with the result that the whole village becomes rich and she is enabled to bring a substantial dowry to her lover, to whom she is eventually united. The third piece, which has been prohibited, is called *Les Avariés* and has for subject the question of the dangers of the marriage of syphilitics. It was prohibited as immoral, although syphilis is not mentioned. But the play is dedicated to Dr. Fournier, Professor of Syphilography at the Faculty of Medicine and President of the Association for Promoting Sanitary and Moral Prophylaxis, concerning which our Paris Correspondent sent an account which appeared in our issue of Dec. 2nd, 1899, p. 1554. No one could mistake the subject of the piece, but its prohibition has been the cause of a lively discussion in the press. On the one hand, it is argued that a dramatic author should be allowed to present on the stage whatever subjects he likes, while others affirm that it would be harmful to morality to discuss so publicly such delicate pathological matters.

THE MANCHESTER AND SALFORD SEWAGE AGAIN.

MANCHESTER and Salford afford so marked an illustration of the suffering that arises from the neglect as well as the ignorance of old times that it should be noted well by all growing places. The Mersey and Irwell Joint Committee consider that Salford has been dilatory as to the treatment of its sewage and have decided "that the clerk be instructed to take such proceedings as would be necessary in accordance with the terms of the order of the court, dated July 9th, and May 23rd, 1898." One of the members spoke feelingly as to the Ship Canal never having been so filthy as during the past summer and of the immeasurable suffering from the filthy stench at Eccles, where "he had not been able to open his drawing- and dining-room windows for a week at a time." Manchester was dealt with more leniently, as it was considered "that the corporation were earnestly endeavouring to meet the wishes of the Joint Committee, and they recommended that the consideration of the position of the Manchester Corporation should be adjourned for six months." It is stated that in a few months more than half the sewage of Manchester will be dealt with on the bacterial system.

RUMINATION IN THE HUMAN SUBJECT.

IN a long paper reprinted from *Il Policlinico* (Rome: Società Editrice Dante Alighieri) Dr. Silvio Silvestri of the Civil Hospital, Verona, has given an interesting account of a case in which of a family of six persons the father and three sons possessed the unusual faculty of rumination, whilst the mother and only daughter were normal in this respect. Several writers have already observed that the subjects of this peculiarity were most usually males from 10 to 20 years of age who suffered also from some neurotic condition such as hysteria, neurasthenia, epilepsy, idiocy, or mental aberration. Dr. Silvestri's observations were made upon the three brothers above referred to, who were respectively 20, 18, and 15 years of age. Their family history showed a neurotic taint, for a maternal uncle had died insane, and the father was not only neurasthenic, but presented the phenomenon of rumination when a young man, whilst the mother had never exhibited any neurotic symptom and the sister of the young men although neurotic did not ruminate. The eldest brother was hypochondriacal, irritable, and incapable of mental work. Rumination commenced at the age of 15 years without any recognised cause and had continued up to the present time. His motor and sensory conditions were normal, as were also his organs of special sense with the exception of a slight diminution of the visual field; his knee-jerks were exaggerated; the other reflexes were normal. About 10 minutes after taking food he began to experience a sense of weight in the epigastrium and soon afterwards an imperative need to return the food to his mouth, a manœuvre which was more easy with solid and semi-solid substances than with liquids. The different articles of food returned to the mouth in the order in which they had been taken, so that the man had a double experience of all the flavours of a dinner. A powerful effort of will was generally capable of preventing the occurrence. During the first hour there were about 25 separate acts of rumination; then their frequency decreased and they came to an end about two hours after the food had been taken. With the second of the brothers, aged 18 years, rumination had existed for four years without being attributable to any known cause. With the third of the brothers, aged 15 years, it had existed for about two years. He said that he remembered distinctly that it commenced after he had fallen from a height of six feet, striking his thorax and epigastrium against a stone. Re-mastication of the food is an essential of rumination, which is thereby sharply distinguished from simple regurgitation. Dr. Silvestri has seen an instance of regurgitation in a man, aged 22 years, who for about the space of a year felt his food rise into his mouth some minutes after it was taken, so that he either had to eject it or if he was in company he swallowed it again without chewing it. The first rational explanation of rumination in the human subject was given by Dumur[1] who ascribed it to paralysis of the muscular tissue of the lower end of the œsophagus. Dr. Silvestri defines it as a motor neurosis of the stomach, the exciting cause of which is an abnormally sensitive mucous membrane, but the primary cause is cerebral or psychic (cortical). He gives references to about 27 memoirs on the subject and makes several suggestions as to treatment.

THE OVERLOADING OF HORSES.

ANYONE whose occupation calls him into any portion of London where there is much traffic cannot but be struck by the disgraceful manner in which horses drawing coal, timber, and other heavy goods are overladen. The principle upon which owners go appears to be this: they ascertain how much a horse can draw in dry weather upon a smooth asphalte or wood pavement on the level. Regardless of the incessant changes of surface, whether due to inequalities caused by road-breakers, the vagaries of the weather, or change of level, they send their horses out in all weathers with a load calculated upon the rule which we have indicated above. Over and over again we have seen carters vainly endeavouring to get a perfectly willing horse attached to a heavy load up the steep ascent of Bedford-street. We wish to give the average carter every credit for the patience and gentleness with which he treats the horse in his charge, but it is not fair either to the man or to the horse

[1] De la Paralysie du Cardia ou Méryeisme (Diss. Bern., 1859).

that they should be called upon to perform impossible tasks. The sole reason why owners behave in this manner is due to a desire to save their pockets, but we should have thought that truer economy would be to use either more horses or to give out a lighter load. The municipal authorities are by no means blameless, for they keep the roadways very far from clean, while as to the sprinkling of gravel the lower portion of Bedford-street is apparently a sort of no man's land. The Strand is occasionally washed and fairly well gravelled. The upper part of Bedford-street is washed every day or so and gravelled when necessary, but the portion between Maiden-lane and the Strand, in which the declivity is steepest, is, as far as our knowledge goes, hardly ever washed or gravelled. Here is a good field for anti-vivisectionist activity.

THE CHEAP PISTOL ONCE MORE.

THE murder of a bank cashier at Kennington, the narrow escape of his fellow-clerk, and the death of the murderer by his own weapon, do not enable us to add anything to what we have already written as to the unrestricted sale of cheap revolvers, except that we may point out that full reports of crimes of this class in the newspapers are read with eagerness by certain classes of the community and advertise the cheap revolver and its deadly characteristics, and thus, while they horrify reasonable people, suggest crime to those minds that are prone to accept such suggestion. In this connexion it may also be added that the "Leicester-square tragedy," the "Blackfriars tragedy," and the "Kennington tragedy" have this feature in common which they owe to the weapon the sale of which we would see closely restricted, that in each case the perpetrator of the crime has escaped justice. He has done so, truly, by sacrificing his own life, but suicide has ever been less dreaded by the criminal than trial and execution. In itself the Kennington murder is a typical instance of the crime which the cheap pistol almost creates. It could not have been committed so easily, and would hardly have been attempted, without firearms, while the murderer was apparently penniless when he did it, and in any case if the weapon had cost a substantial sum and if he had had to take out a licence before purchasing it he would probably never have thought of acquiring such a possession. It will be remembered that besides these startling crimes which attract wide attention, every assize in London and our other great cities brings before judges and juries similar cases of less sensational nature, such as felonious shootings without fatal result, while the uncounted accidents that occur are to some extent brought home to members of the medical profession but are hardly heard of by the general public.

POLITICAL ASSASSINS: A MEDICO-PSYCHOLOGICAL STUDY.

PROFESSOR CHARLES K. MILLS of Philadelphia contributes to the *Philadelphia Medical Journal* of Oct. 26th a long and interesting article dealing with the subject of political assassinations as a medico-psychological study. The investigation is based on 15 historical cases of assassinations beginning with that of Henry III. of France by Jacques Clement in 1589, and a careful study of the medical and psychological data shows that the assassins fall into four classes—viz., sane assassins, insane assassins, assassins who were "degenerates" but not insane, and finally assassins who were probably both degenerate and insane. Among sane murderers are classed the members of the Orloff family who in 1762 assassinated Peter III. of Russia, and Jacob Anckerström, an ex-captain of the army who killed Gustavus III. of Sweden. In the same class are included John Wilkes Booth the assassin of President Lincoln. Booth was an alcoholic degenerate, erratic in life and conduct but not insane. Among insane assassins are included Ravaillac, who in 1610 stabbed Henry IV. of France; Louvel, who in 1820 assassinated the Duc de Berry, son of Charles X. of France; and Guiteau, who assassinated President Garfield in 1881. Ravaillac was the subject of visual hallucinations and religious delusions, Louvel was a monomaniac with fixed delusions, and Guiteau was a paranoiac with hallucinations and political delusions complicated with incipient symptoms of general paralysis. The "degenerates" of the assassin type include Clement (degenerate, fanatic, and mentally unbalanced), who murdered Henry III. of France; Charlotte Corday, who stabbed Marat in the times of the French Revolution; Cesario Santo, the assassin of the late President Carnot of France; and Michel Golli, anarchist and fanatic, who assassinated Señor Canovas, the Premier of Spain, in 1897. The three most recent assassinations include those of the Empress of Austria, King Humbert of Italy, and President McKinley. Luigi Luccheni, who assassinated the Empress of Austria, was a "degenerate with criminal instincts." Gaetano Bresci, the murderer of King Humbert, was a degenerate of moody temperament—a man whose criminal tendencies were diagnosed and foretold by Lombroso. As regards Czolgosz, the murderer of President McKinley, Professor Mills, from a very careful investigation of the facts available, concludes that he was a degenerate, but probably sane. Many of these degenerates, says Professor Mills, were youthful, and probably had they lived longer would have developed insanity, their earlier records showing that they were "borderland" cases on the margin of sanity and insanity. Thus, Jacques Clement was 25 years, Charlotte Corday 25 years, Booth 27 years, Luccheni 25 years, and Czolgosz 28 years of age. "Louvel had reached 37 years, and Guiteau 42, and in both of these cases the insanity was well developed." The lesson to be drawn from these studies is that the degenerate with criminal tendencies in youth requires permanent sequestration so as to prevent him from becoming dangerous to the community.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Mauritius received at the Colonial Office on Nov. 8th states that for the week ending Nov. 7th there were 85 cases of bubonic plague and 50 deaths. As regards Egypt, during the week ending Oct. 27th 2 cases of plague were reported from all Egypt. No deaths from the disease took place. The 2 cases, which were both in natives, occurred at Zifta. During the week ending Nov. 3rd 2 new cases of plague and 3 deaths from the disease were reported from all Egypt. Alexandria reported 1 admission and 1 death, Mit-Ghamr 1 admission and one death, and Zifteh 1 death from among the patients admitted during the previous week.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

A GENERAL meeting will be held in London at the rooms of the association, 11, Chandos-street, Cavendish-square, W., on Thursday, Nov. 21st, at 3 P.M., under the presidency of Dr. Oscar Woods. Previously to the general business the following will meet: Educational Committee, at 12 noon; Council, at 2 P.M. Sir Thomas Lauder Brunton, M.D., F.R.S., F.R.C.P., physician to St. Bartholomew's Hospital, will read a paper upon "Fairies, Apparitions, Visions, and Hallucinations." If time permits Dr. Lionel A. Weatherly will read a paper upon "The Evolution of Delusions in Many Cases of Melancholia," and Dr. William C. Sullivan (deputy medical officer of H.M. Prison, Pentonville) a paper upon "Crime and General Paralysis." The members will afterwards dine together at the Café Royal, Regent-street, W., at 7 P.M.

A NEW MEDICAL KNIGHT.

HIS MAJESTY THE KING has been graciously pleased to confer a knighthood upon Mr. George Anderson Critchett. Mr. Critchett, who, as was his father the ate well-known George Critchett, F.R.C.S., is an ophthalmic surgeon, and was educated at Harrow and Cambridge. He is senior ophthalmic surgeon to St. Mary's Hospital, was President of the Ophthalmological Society of the United Kingdom during the year 1900-1901, and he is surgeon-oculist to His Majesty. His many friends will join us in congratulating him upon his well-earned distinction.

SMALL-POX IN LONDON.

SMALL-POX is not decreasing in any marked manner. On Saturday and Sunday, Nov. 9th and 10th, the fresh cases admitted to the hospitals of the Metropolitan Asylums Board numbered 29. On Monday, the 11th, there were 14 fresh cases; on Tuesday, the 12th, the number was 12; and on Wednesday, the 13th, the number was eight, being an average for the five days of 12·6 per diem.

GUY'S HOSPITAL.

MR. COSMO BONSOR, the unwearying treasurer of Guy's Hospital, is publishing an urgent appeal to the public in behalf of this great charity. His appeal shows that Guy's Hospital requires immediately the sum of £180,000 to carry out constructive amendments to a building now nearly 200 years old, while an additional income of at least £14,000 is wanted to cover the annual expenditure of the hospital if it is to work at full efficiency. The medical and surgical staff of Guy's have made a splendid contribution of upwards of £2000 towards the needs of their hospital. That Guy's Hospital is a charity most deserving of support is a fact which our readers may be able to impress upon the public.

ON Dec. 3rd there will be a discussion at the Pathological Society of London on "Lymphadenoma in its Relation to Tuberculosis," which will be opened by Mr. H. T. Butlin. Gentlemen who wish to join in the debate or to show specimens bearing on this subject are requested to send their names to the Honorary Secretary of Section A, Pathological Society, 20, Hanover-square, W.

AT the Court of Assistants of the Worshipful Company of Dyers, held at the Hall of the Company on Nov. 6th, Dr. George Flux and Sir Edward Montague Nelson, K.C.M.G., took their seats as Prime Warden and Renter Warden respectively, they having been previously elected at the last General Court, held on Oct. 9th.

THE next dinner of the Glasgow University Club, London, will be held on Thursday, Nov. 28th, at 7 P.M., at the Hotel Cecil. Dr. G. A. Heron will preside and Mr. Norman M. Maclehose, M.B. Glasg., is to be entertained as the guest of the club in recognition of his long and valuable services as one of the honorary secretaries.

THE annual dinner of the Harveian Society of London will take place at the Café Monico on Thursday, Nov. 28th, at 7 P.M.: the President, Dr. D. B. Lees, will be in the chair.

THE General Medical Council will commence its next session at the Council's office, 299, Oxford-street, London, W., on Tuesday, Nov. 26th, at 2 P.M.

"TYPHOID, THE DESTROYER OF ARMIES, AND ITS ABOLITION."

DR. H. E. LEIGH CANNEY delivered on Nov. 12th at the United Services Institution, a lecture on the subject of Typhoid Fever as the Destroyer of Armies. Sir WILLIAM BROADBENT presided and the lecture was well attended.

After pointing out that the great destroyers of armies, whether in war or peace, were typhoid fever, dysentery, and cholera, the lecturer discussed at some length the differences of opinion upon the way in which typhoid fever spreads and quoted examples from history—the Paardeberg outbreak, for example—to show the disastrous effect which it had upon military campaigns. He then proceeded to detail his scheme, which starts on the assumption that all water in war is to be regarded as contaminated. He said:—

Certainty of method.—I have adopted the method by boiling or heat sterilisation. This is the most practicable, least liable to errors in method, and requires less expert skill than filtration or chemical processes. This method has as advocates the late Professor of Military Hygiene at Netley, the present Director-General of the Army Medical Department, and the highest medical authorities in the French and American armies. In addition it has met with marked success in two or three minor campaigns. The method is also more rapid and certain than any chemical method.

Simplicity of mechanism.—The apparatus which I have proposed consists of a cylindrical copper boiler with large heating surface below, arranged in wedge-shaped pockets which can be easily cleaned. It holds 50 pints (six and a quarter gallons) of water. An iron stand is provided under which a petroleum lamp is placed, with rapid and complete combustion under air pressure. The whole weighs 38½ lb., and measures 33 inches in height by 17 inches in diameter. The apparatus is constructed to allow repairing very readily if shot through, and would be accompanied by duplicate parts, &c. Cloths would be used to strain mud from the water, but no other filtration of water would be desirable. This boiler and lamp can raise 50 pints (six and a quarter gallons) of water from 54° F. to the boiling point in 11 minutes, consuming three-quarters of a pint of petroleum. Cooling is effected, by covering the pint tins with cloth damped in the fluid, in six minutes. I may here mention that the most practicable steriliser hitherto found of any use on service is the Waterhouse-Forbes, which weighs 29 lb., and sterilises only five gallons of water per hour. There is also a later heavier variety. The apparatus which I have proposed sterilises about the same quantity of water as the best previously known in one-sixth of the time, with less consumption of fuel, and is about half the weight of the latter instrument. One mule (carrying easily 200 lb. weight) would transport the following supplies for the unit of 100 men:—

	Pounds.
Two machines, in cases with lamps and stands	90
42 pints of petroleum (sufficing for four pints of boiled water daily for each of 100 men for seven days) and case	45
Sugar, tea, meat-extract, vegetable powder	40
Saddle, two collapsible buckets and ropes	25
Total	200

Time.—In cases of urgency the men of the water section would only raise the temperature of the water to 180° F. This temperature would be reached in nine minutes and the liquid would be cooled sufficiently to drink as soup or meat-extract in two minutes. To obviate delay the time required could in most instances of urgency be arranged for by allowing the water section to advance half a mile in front of the troops, but a mile and a half behind the scouts, so that tea or soup should be ready on the arrival of the troops. The morning and evening meals would always be welcome as hot tea or soup, and probably the mid-day meal. The water-bottles and carts would be filled over-night with boiled water.

The machines and fuel would be used for no other purpose than for supplying fluids for the army. All water-carts and utensils used to convey water to the firing line must be under the control and care of the water section. Mules have been chosen as transport to prevent separation of the water section from the men in difficult country. The advantage to the men of being able to obtain rapidly tea, soup, &c.,

with their dry biscuit when the transport is often miles behind is something which, if once established, the men would never give up.

Continuity of action.—I have shown that there is at present no method known to science by which any specimen of water likely to be met with in war can be declared free from the enteric bacillus. As you cannot say, therefore, what part of your lines of communication may be attacked, you guard the whole extent. The water section must not rely upon the chance of finding fuel. The fuel used in this scheme is petroleum, and must be as constantly at hand as ammunition. For an army of 200,000 men, to give every man four pints of boiled water daily would require 547,500 gallons of petroleum for the year. This would cost about £16,000 and weigh about 1833 tons. The general transport required for this army daily is 2000 tons. This fuel would add daily about five tons to this 2000 tons, or an increase of $\frac{1}{400}$. Further, to ensure continuity of action, the transport of this water section must be made independent of the general transport, and must march with the regiment or unit. The transport of reserve fuel required by the water section, minute as it is in regard to the total transport, must take precedence of all transport except one day's ammunition. The transport of the water section must be regarded as sacred, the amount telegraphed for must be sent instantly. No general should stop it or cut it down on any account whatever. Neither should the mules be used for any other purpose. The more difficult the country from a transport point of view, by reason of "single lines of rail" or none at all, the more urgent the need for absolute punctuality and precision in the details of the water-section transport and work, in order to effect the immense reduction of general transport that I have shown must ensue.

Automatic working.—To ensure this system working, a system which assumes that no water will be drunk in war from the day of embarkation to the day of return which is not "approved" by the water section, it is evident that much attention to detail is necessary, and that success depends on insisting that there should be no man in the army who is not directly interested in the scheme and its results. In fact, every man should look to this section for that protection which should keep him face to face with the enemy or his work, and should regard any departure from its protective action, either in himself or in his comrades, as an act of cowardice and likely to lead to serious injury to the army, to his comrades, and to his country. In this light also should the country regard his action. To reduce the number of these departures from duty to what no one can believe will not rapidly become amongst our men—regulars, volunteers, colonials, and naval—a mere fraction, various steps are necessary.

The men.—They must understand that the scheme is a sound one and can be relied on. Just as they rely on their artillery or service of ammunition, so they may expect smartness and training in their water section in the delivery of "approved" water. They must be earnestly taught by the sanitary officers of divisions, both by literature and otherwise, the consequences in the past to armies that have neglected these precautions. They must be taught to fear "unapproved" water, in peace and at manœuvres, not only on their own account, but for the sake of their comrades who will be exposed to grave risks in consequence of their departure from duty, for the sake of their families, and for the reputation of their regiment. If there are a few men unamenable to teaching, their comrades will know how to deal with them, and neither the country nor the army will regret their loss. This suppositious minority must be made no argument for neglecting to provide the remainder of the men with the means of keeping their face to the enemy whom they desire to meet.

Officers.—All officers must be trained and examined in the elements of sanitary science, as it concerns the management of camps, disposal of excreta, technique in force for providing "approved" water, selection of camp sites, &c. They must be directly responsible for the successful administration and working of the water section in the troops under their command and for the ordinary sanitation of their camps. In the sanitation of an army they must be considered to correspond to the sanitary or executive authority of civil life. In circumstances of real stress, such as the possible failure of fuel, the water section will, with the consent of officers, "approve" water available, but the circumstances must be noted and reported to the sanitary officer of that division. In the promotion or distinction of every officer a record of his successful sanitary administration must be kept and required. This record shall be produced from the records of the Sanitary Department of the Royal Army Medical Corps and be based on the incidence of water-borne disease amongst the men under his charge and on the sanitary officers' previous reports of inspections of camps and methods, special note being taken as to whether the remedy for any defects was within the power of that officer or whether the responsibility was to be fixed upon a higher officer. There can be no officer in the army, be he officer of Guards or Volunteer corps, who will not welcome this new interest and responsibility in the welfare of his men. It must at once be made absolutely clear that there can be no departure from this principle and that there is no place in the King's service for any officer who might think these duties and responsibilities of minor importance or outside the sphere of his deep interest. In the official reports of the Sanitary Department on the sanitary work of superior and general officers, a record must also be kept of the efforts made by such officers to take into consideration the reports of the Sanitary Department on the sanitary administration of officers otherwise eligible for promotion or distinction. In the possible case of repeated contravention of this principle the Director-General of Sanitation will directly call the attention of the Advisory Board to the matter, who will bring the same before the Commander-in-chief.

Sanitary officers of the Royal Army Medical Corps.—Whilst all officers of the Royal Army Medical Corps are to be, as at present, trained in military hygiene that they may be able to advise combatant officers on the best means of applying their new knowledge and instructions to the greatest advantage, a special number of officers of the Royal Army Medical Corps, who have either distinguished themselves in this branch in the army or have been passed into the army on this account, must be regarded as sanitary officers, in the proportion, perhaps, of one to a division. Their duties shall especially be: 1. The education of all officers placed under their care in the methods regarded by the Sanitary Department of the Royal Army Medical Corps as the best to be adopted at the time. This information they should give by printed instructions, lectures, or demonstrations, in such a manner as to enable officers to qualify in this subject either on admission to the army or at the subsequent examinations required at present for promotion. 2. The education, certification, and re-examination of the men of the water section. 3. The education of the men on the disasters resulting from insanitary conditions of camps or water-supply, and the encouragement of the men in a feeling of comradeship in prevention of water-borne disease—their worst foe in war or peace. Practically speaking, the sanitary officer's duties terminate at the declaration of war; if his work of education has not been completed by then, his presence on the battle-field can have but little influence in warding off the coming disaster. If his work has been well done in the time of peace, success will follow his men. The responsibility is now with the officers of all units, they are the responsible executive for the sanitary teaching given. On active service sanitary officers would best be employed in the immediate separation of any suspicious cases of these three diseases, and in assisting general officers in the selection of camp sites. In addition to the sanitary officers of divisions there must be a sanitary officer, ranking with the principal medical officer, on the staff of every army corps and on the head-quarter staff of every expedition or war. There must also be a director-general of sanitation, or chief sanitary officer of the army, who shall be on the Medical Advisory Board, on the Army Board, and on the War Office Council. Sanitary officers shall only deal with questions of preventive medicine. Sanitary officers are not officers of the water section, except when the men of the water section are being trained by them.

The water section.—The men of the water section should be specially recruited for intelligence and trustworthiness in the proportion of 2 per cent. of strength. They are to be specially employed men, borne on the strength for one purpose only, to be recognised as men technically trained to provide their corps or unit with "approved" water and to guard it against all the water-borne avenues of typhoid fever. The training of the men of the water section will devolve upon the sanitary officers of the Royal Army Medical Corps, or in exceptional cases on the medical officer of the unit or garrison. The sanitary officers shall also train a reserve of water section men, not exceeding another 2 per cent. of strength. After training and certification the men of the water section shall pass absolutely under the control

of the commanding officer of the corps of which they are to form part, who is directly responsible for the carrying out of their duties, subject to the advice, recommendation, or orders he may seek or receive from the sanitary staff officer. These men shall be taught the responsibility of their work. Their success, as in the case of officers, must be noted and meet with its reward, both in war and in peace. The duties of this section stationed abroad in times of peace I have indicated elsewhere; suffice it to say here that the principle of "approved" water only is to be carried out by them at all stations abroad, and is to follow the men into the bazaars, which are at present largely beyond barrack rules and produce disastrous results. The men of the water section will learn that the technique required for the sterilisation of typhoid or cholera water to be used for drinking purposes is a laboratory experiment, and is not the same thing as preparing hot water for a bath. The serious responsibility of their duties, requiring special recruiting and training, the smartness and rapidity of action required, and the influence and respect they are to command among their comrades, require that everything should be done to give them prestige in the corps or unit of which they form part. The designation "water section," in preference to to "sanitary section," has been adopted for several reasons. These men must have no other sanitary duties whatever, and therefore, they are not a "sanitary section."

Progress and advance.—Every effort must be made, by offering distinction or reward to officers and men of either navy or army, or to civilians who shall be able to suggest any suitable modification of the methods at any time in force, which shall render the work of this corps more simple, rapid, or effective.

It will have been noted that the scheme endeavours to interest directly every officer and man in the army in preventing the action of their three main destroyers and to bring the highest sanitary teaching to the service of every interested officer and man. It endeavours to avoid adding one ounce to transport unnecessarily and at the same time to make it clear that the general who shall leave that ounce behind is courting disaster and inflicting on himself the absolute penalty of subsequent tons of useless transport. If he deny the soldier that ounce of extra transport he will have to carry as an invalid the soldier himself. I have shown that the remedy for these evils is a campaign within a campaign, to be fought *pari passu* with every step of every unit of the army: that the unseen bacillary enemy is as real and as disaster-bearing as the human foe; and that to take no account of this foe, to under-rate its power, or to trust to the chance of avoiding it, as is the rule in military strategy at present, is to be a quarter of a century behind the times, is futile, and must in the future bring disaster and disgrace on the general who shall exhibit such weakness.

The advantages of this scheme are: (1) total immunity from water-borne disease, which amounts to four-fifths of the mortality and invaliding of armies; (2) the absence of discomfort and inefficiency on the march from minor illness; (3) diminished thirst and discomfort by accessible tea, meat-extract, soup, &c., several times a day, in place of foul water, a biscuit, and late transport; (4) an enormous reduction of transport; (5) great increase in effective strength; (6) the liberation of the officers and men of the Royal Army Medical Corps for care of the wounded by emptying the typhoid and dysentery hospitals; (7) the acceleration of the war and the saving of enormous expense; and (8) the placing of responsibility in the proper quarter for the future, making such subterfuges as "Hospital Commissions" or inquiries an impossibility.

The essentials in this scheme are: (1) a trained water section of 2 per cent. of the strength; (2) the training and education of all officers in sanitary methods; (3) the education and training of the men in its advantages to themselves and their comrades; (4) the appointment of expert sanitary officers; (5) the responsibility of all non-medical officers for the executive sanitary work of camps or units; (6) the responsibility of the same officers for the incidence of water-borne disease—enteric fever, dysentery, and cholera—in their units; (7) the transport of this water section to be sacred, used for no other purpose whatever, largely independent of all other transport (the transport of reserved fuel, &c., to take precedence, if required, of everything except one day's ammunition); and (8) the establishment of a tradition that it is dishonourable and a crime to use any water for drinking purposes not "approved" or allowed.

I now leave the scheme in your hands, anxious that if you are in agreement as to the essential points and as to the considerable success that might fairly be expected you will express that opinion, as well as any difference of opinion on any minor points. The particular technique at present suggested is likely to be much changed and improved upon in the course of time. The essentials in organisation to which I have referred are likely to be found permanently necessary. I trust, however, that you will agree with me in insisting that the time has come for systematic endeavour to secure for the rank-and-file of every part of our forces in both services, in war and in peace, an "approved" water, and the closure of all other avenues of water-borne disease. It must be remembered that in any great struggle in the future the regular army will only be the trained nucleus of that great force of volunteers, home and colonial, who, desirous to meet the enemy, do not volunteer to suffer uselessly weeks of filthy, neglected, and too often fatal sickness, through being compelled to drink "unapproved" water, when the avoidance of these evils, together with the means to prevent them, can be shown to be a direct benefit to every department of the army in the immediate function for which it has been created.

Among those who took part in the discussion were many who were well qualified to judge of the merits of Dr. Canney's scheme, and with but few exceptions the speakers described it as an admirable one.

The CHAIRMAN then invited discussion, remarking that Dr. Canney's scheme showed evidence of having been carefully thought out. A most important part of the scheme to his (Sir William Broadbent's) mind was the education of officers and men in times of peace in the importance of drinking pure water.

Major R. H. FIRTH, R.A.M.C., professor of military hygiene at Netley, expressed great sympathy with the scheme as a whole, and thought that with further consideration something might be made of it. Its success depended on the whole-hearted sympathy and coöperation of every officer.

Major-General Lord DUNDONALD said that his experience in South Africa led him to the belief that it was impossible to make water safe for drinking purposes by filtration only. It could only be done by sterilising by heat. With that object in view on his return to this country he devised a means of carrying water in vessels which could be used for boiling purposes. When the war broke out in South Africa the arrangements for water-supply to the troops were, no doubt, in accordance with the regulations, but everyone must feel that they were not in accordance with the progress of the year 1900, and if those in power would attend to the advice of men like Dr. Leigh Canney thousands of lives would be saved in future wars. It was impossible to over-estimate the importance of instructing every officer in the army in sanitary work and in the maintenance of camps in a cleanly state. They could not expect the company officer and the colonel of a regiment alone to take an interest in this matter. It must be forced upon them from above.

Dr. J. W. WASHBOURN, C.M.G., said that water was the main agent by which enteric fever was spread, but flies and dust also played a part in its dissemination. They had to provide a pure water-supply, and to see that sewage excreta were properly disposed of. For that purpose there ought to be a sanitary corps to see not only to the water but also that all other sanitary precautions were taken, especially in the case of standing camps, and that corps should be a branch of the Royal Army Medical Corps.

Dr. S. RIDEAL, D.Sc. advocated the use of a chemical bisulphate of soda which required 15 minutes to do its work.

Dr. A. CONAN DOYLE had witnessed the neglect of the most ordinary precautions among the soldiers in South Africa and its results. No one had remonstrated. If it was not stretching red tape too far, why should not Dr. Leigh Canney be sent straight out now to South Africa with his apparatus? Let him be attached to one single column and see whether the results would turn out better than in any other column. And why should not Dr. Rideal, who recommended a chemical solution, be sent out, too, and the results of the two treatments be compared. This was not a time for academic discussion. The house was on fire and it was time that they were taking some practical step to put it out.

Brigade-Surgeon-Lieutenant-Colonel MYERS, R.A.M.C., said that the men should be educated to go for a whole day without water. He had trained himself to go a whole day in the hottest part of Africa without drinking.

Major H. A. CUMMINS, R.A.M.C., Brigade-Surgeon-Lieutenant-Colonel W. H. CLIMO, Dr. SCOTT MONCRIEFF, Captain WALKER, R.E., Surgeon-General A. C. C. DE RENZY,

C.B., and Captain DANCE, R.E., also took part in the discussion, which was briefly replied to by Dr. LEIGH CANNEY.

Colonel LONSDALE HALE then summed up in the absence of Sir William Broadbent who had been obliged to leave. His conclusion was that as far as the South African campaign was concerned officers and men had not taken proper precautions to guard against typhoid fever, and therefore the public were beginning to think that these terrible casualties from the disease could not be prevented. As a matter of fact in many cases they should really be classed as "regrettable incidents."

SCHEME FOR THE ERECTION OF SANATORIUMS FOR THE TREATMENT OF TUBERCULOSIS.

THE erection of sanatoriums is now one of the problems attracting the attention of sanitarians and the first step to grapple with the question from a new point of view was recently taken by some of the sanitary authorities of Hampshire. The history of the movement is as follows. In the early part of this year an attempt was made in Portsmouth to erect by voluntary contributions a sanatorium for the treatment of the consumptives of that town, but owing to numerous other calls on the purses of the charitable the project fell to the ground from lack of support. On its becoming evident that this scheme would not succeed it was suggested by the medical officer of health to the sanitary authority that possibly the powers given by the Public Health Act of 1875, for the provision of hospitals for the reception of the sick, might be construed to cover the erection of a hospital or sanatorium for tuberculous patients out of the rates, and subsequently the suggestion was made that it would be cheaper and in many ways more advantageous, instead of erecting a sanatorium for the Borough of Portsmouth alone, to communicate with the various other sanitary authorities of the county of Hampshire, and, if possible, to gain their coöperation in building a joint sanatorium for the treatment of their respective phthisical inhabitants. This suggestion was acted upon and a circular letter was sent to all the sanitary authorities in the county of Hampshire putting the project before them and suggesting that if they approved the principle delegates should be appointed to attend a preliminary meeting to discuss how the scheme could best be carried into effect. As a result 10 sanitary authorities, including nearly all the larger towns of the county and representing a population of 344,223, or 47 per cent. of the total population of the county, met on Oct. 15th, at the Town Hall, Portsmouth. The meeting was undoubtedly a success; the delegates were unanimous in their approval of the scheme, and after passing a resolution, "That in the opinion of this meeting it is desirable for the authorities in the county of Hampshire to unite for the purpose of providing a sanatorium for the treatment of consumptive patients of the county," proceeded to appoint a sub-committee, consisting of a delegate from each authority represented, to draw up a working scheme and to report to the full meeting of delegates. It was decided in the meantime again to communicate with those authorities who had so far not joined in the scheme with a view to obtain their coöperation.

This method of dealing with the provision of sanatoriums is, so far as we are aware, a new departure, and the future development of the undertaking will be followed with considerable interest throughout the country. It is evident that, in the same way as public opinion has enforced the provision of isolation hospitals for infectious diseases, sanitary authorities will, in the near future, be compelled to erect sanatoriums for the treatment of cases of tuberculosis, and it is probable that in this matter public opinion will be considerably stimulated by the resolution passed at the British Congress on Tuberculosis held in London in August last—namely, "That the provision of sanatoria is an indispensable part of the measures necessary for the diminution of tuberculosis."

The 131st section of the Public Health Act under which it is proposed to proceed reads as follows:—

> Any local authority may provide for the use of the inhabitants of their district hospitals or temporary places for the reception of the sick and for that purpose may themselves build such hospitals or places of reception; or contract for the use of any such hospital or part of a hospital or place of reception; or enter into any agreement with any person having the management of any hospital, for the reception of the sick inhabitants of their district, on payment of such annual or other sum as may be agreed on. *Two or more local authorities may combine in providing a common hospital.*

It is the last sentence of this section, that giving the power of combination, that the present scheme is more particularly concerned with. It will be remembered that it is under this section that power is gained for the provision of infectious disease hospitals throughout the country. It will be noted, however, that there is nothing in the section limiting its application only to hospitals for infectious disease, but whether the local authorities of Hampshire will find that it is sufficient to cover the provision of a sanatorium remains to be seen. It is unfortunate that although the Act gives local authorities power to combine for the provision of a hospital it does not go on to define the detailed stages to be taken to effect that combination, or on what basis the proportional part of the expense is to be borne by the combined authorities, or how the committee of management is to be elected and what should be the proportional representation of each authority on the committee; and owing to the many jealousies which unfortunately often exist between the various towns and districts in a county the absence of such details will necessitate the greatest caution and care being exercised by the various members of the committee in order to bring the matter to a successful issue. As to the advantage of some such scheme few will have any doubt. It is well known that in hospital erection the cost per bed varies in inverse ratio to the size of the hospital; it is, for example, cheaper for two towns of 1000 population to provide one hospital, say, of 100 beds than for each to erect one of 50; and it would be better for a county to have one sanatorium, or possibly two, for all its various districts than for each to provide a sanatorium for itself. Not only is the cost of erection lessened by union, but still more is the cost of administration and maintenance, for it will be necessary to have one administrative block only and probably a fewer number of medical men, nurses, and attendants. Another point in favour of a conjoint sanatorium is the necessity of obtaining a favourable site. From what we know as to the suitability of sites for sanatoriums it is found that in most counties there are few sites perfectly suitable, but by a combination of the various authorities the very best site in the county may be selected, and to it may be sent all the consumptive patients of that county, whereas should each large urban district have its own sanatorium it would probably have to put up with, not the best site in the county, but the best procurable in its vicinity. Still, again, anyone who has had to do with the procuring of a site for the use of one sanitary authority in an adjoining district will appreciate at once the reduction of obstacles by combination of authorities. Lastly, there is no necessity, as in the case of infectious disease hospitals, to have the sanatorium in the neighbourhood of the town from which the patients are sent; on the contrary, it is most desirable that the sanatorium should be as far distant as possible from any populous part.

In favour of the provision of sanatoriums out of the rates instead of by voluntary contributions there is much to be said. Foremost may be mentioned the fact that a charge may be legally made for each patient, so that patients may enjoy the benefits of the sanatorium without feeling a loss of independence or that they are recipients of charity. There are probably a large number of phthisical patients in the country belonging to the middle classes unable to pay the three to five guineas per week demanded in the private sanatoriums who would willingly pay from 25*s.* to 35*s.* per week, which would probably be about the charge made at a county sanatorium. It is not intended to provide a sanatorium purely for the poorer classes, but as all pay rates, so all ratepayers will have a right to the benefits of the institution; the sanatorium would be adapted for all classes and the charges made would vary according to the more luxurious accommodation provided for better-class patients.

Taking all these points into consideration the plan proposed by the sanitary authorities of Hampshire seems a move in the right direction, and we wish it every success. Should it not attain the success anticipated—and it is no use disguising the fact that many and troublesome difficulties will first have to be overcome—it is quite possible that the attempt made by Hampshire may be the means of initiating a system of county sanatoriums throughout

the country. Some such Act as the Isolation Hospitals Act, 1893, which empowers county councils to combine rural and small urban districts for the purpose of isolation hospital provision, but applying to tuberculosis instead of to the infectious diseases enumerated in the Notification Act, and applying also to county boroughs and other towns, would probably greatly facilitate their establishment. It is also probable that the control of such concerns by a central body like the county council would be more likely to avoid local jealousies which form the rock on which so many attempts at conjoint action come to grief.

Looking Back.

FROM

THE LANCET, *SUNDAY, NOV.* 16, 1823.

TABLE TALK.

LITERARY BULLS.

A painted vest Prince Vortigern had on,
Which from a *naked* Pict his grandsire won.

This celebrated couplet was probably foisted upon Blackmore; for it is said not to exist in any of his works. It is true that this point must remain in some degree uncertain; for who would read all Blackmore's Epics to ascertain it? Malignity, however, is ever diligent; and if he had really written the couplet, its existence would scarcely have been questioned at this day. It would not be difficult to produce genuine instances of almost equal absurdity, from the works of our best writers. Take a specimen or two:—

Eight callow infants *fill'd* the mossy nest,
Herself the ninth.—*Pope.*

When first young Marc, in his noble mind,
A work t'*outlast immortal Rome* design'd.—*Pope.*

Obey'd as subjects by thy subjects be,
But know that I *alone am King of me.*—*Dryden.*

A horrid *silence* first *invades* the ear.—*Dryden.*

Nor yet perceived the vital spirit fled,
But still fought on, *nor knew that he was dead.*

Every monumental inscription should be written in Latin; for that being a *dead* language, *it will always live.*—*Johnson's Life of Pope.*

Turn from the glittering bribe your scornful eye,
Nor *sell* for gold *what gold can never buy.*

These observations were made by *favour of* a *contrary* wind.—*Tour to the Hebrides.*

The last bull reminds us of an old friend of ours, one O'Callaghan, from the sister kingdom, who, as an excuse for not returning to Eton, *wrote word* that the winds were so adverse it was impossible for the packets to sail.

One of the best practical bulls of this kind, is the following, which is given by Mr. Edgeworth, in his Essay on this subject. A gentleman writing a letter in a coffee-house, observed an officer from the sister kingdom, coolly looking over his shoulder, and perusing its contents. He accordingly concluded his letter in the following words; 'I am obliged to break off abruptly, for there is a d—d tall Irishman looking over my shoulder and reading every word I write.' 'You lie, you scoundrel,' said the officer, 'I am not.'

Another bull of this sort occurred recently at the Old Bailey. The officer of the Court upon administering the oath to a deaf gentleman, put his mouth to his ear, and bawled out, 'If you don't hear what I say, tell me so.'

THE GENERAL MEDICAL COUNCIL: ELECTION OF DIRECT REPRESENTATIVES, 1901.

DR. C. E. ROBERTSON'S ADDRESS TO THE REGISTERED MEDICAL PRACTITIONERS OF SCOTLAND.

LADIES AND GENTLEMEN,—In offering myself as a candidate for the direct representation of medical practitioners in Scotland on the General Medical Council, it is necessary that I should briefly express my views on some of the more important matters before the profession at the present time. This I propose to do as follows:—

Infamous conduct in connexion with the sale of scheduled poisons.—This is one of the subjects which stands pre-eminent, on account of the action lately taken by the General Medical Council, at the instigation of the Pharmaceutical Society of Great Britain, in accusing medical men of infamous conduct because certain of their unqualified assistants have been convicted in the public courts of the sale of scheduled poisons. Registered medical practitioners claim exactly the same rights to sell scheduled poisons as do the registered chemists, and they claim no more. These rights are reserved to them by the Pharmacy Acts, and, inasmuch as when the unqualified assistant of a registered chemist is convicted of selling scheduled poison no action has ever been taken against the chemist himself, it reasonably follows that no action ought to have been taken against any doctor in a similar position.

Increase in direct representation on the General Medical Council.—I think that the time is ripe for alteration in the constitution of the General Medical Council, and that that alteration should be made by transferring to the general body of practitioners the power to appoint a majority of the members. Further, I look upon it as an unjust thing that the registered dentists, who pay for their registration as we do, and who are amenable to the General Medical Council for their professional conduct, should have no representation whatever on that Council.

Finance.—The present financial difficulties of the General Medical Council are well known. In dealing with them it seems fair that an effort should be made to induce all the bodies who send representatives to the Council to bear some proportion of the expense before placing a further tax on medical practitioners.

Midwives Bill.—My opinions are at one with the present English candidates on this matter, and I would earnestly support them in their endeavours to prevent the importation into the profession of a lower order of legally qualified and independent medical women.

The one-portal system.—I am in favour of the general principle of one-portal system; but the details of the question present many difficulties on account of its interference with the vested interests of the present licensing bodies. The further consideration of this subject must be subservient to the maintenance of a high standard both in the entrance and qualifying examinations.

Suppression of quacks and other unregistered persons who practise medicine and surgery for gain.—I consider it wrong that the grave and dangerous evil of "counter-prescribing" by chemists and druggists should be allowed to exist; that quacks, bone-setters, &c., should practise medicine and surgery without let or hindrance; and I maintain that the General Medical Council will not have done its duty until it has asked and received from Parliament power to deal with the suppression of these abuses.

In conclusion, I desire to add that, in the event of your returning me as your representative, I shall carefully study the interests of the medical practitioners in every question that may come before the General Medical Council.

I am, yours faithfully,

CHARLES E. ROBERTSON, M.D. Glasg.

63, Dixon-avenue, Glasgow, Nov. 11th, 1901.

DR. NORMAN WALKER'S ADDRESS TO THE REGISTERED MEDICAL PRACTITIONERS OF SCOTLAND.

LADIES AND GENTLEMEN,—After mature consideration I have decided to offer myself as a candidate for the position of your Representative on the General Medical Council.

The duties of the Council are primarily with education, examination, and registration.

Education.—In this there is much room for improvement. Too much time is devoted to subsidiary subjects, and there is thus less to spare for those of real importance. The subjects of biology, chemistry, and physics should be relegated to a preliminary scientific examination which the student should be required to pass before commencing his medical studies proper. It is, I believe, immaterial whether these subjects are studied at the University or at a secondary school.

Bacteriology is a subject of such immense practical importance that it should certainly occupy some of the space which would thus be provided.

Examination.—The examinations are unequal. While in many instances the standard is sufficiently high, in too many it is not, and a more exacting inspection of the examinations should be insisted upon.

Registration.—The duties of the Council with regard to

registration consist in admitting names to and removing them from the Register. The Council registers all those who have passed the examinations under its supervision. The subject either of mutual reciprocity with the colonies or of an Imperial Register should be considered.

The removal of a name from the Register is a serious matter, and must only be carried out when there is absolute proof of an offence in the sense of the Medical Act. It is to be regretted that removal from the Register is the only penalty which the Council can legally enforce, but it should be borne in mind that warnings are often efficacious.

As a teacher and an examiner and one in close touch with the teachers of an important medical school I believe I am competent to represent your interests in these matters.

In addition to its main duties, the Council has recently given some attention to matters affecting the general practitioner.

The subject which has attracted greatest interest is that of midwives registration. On that subject my views are very clear and decided. Having been for several years Convener of the Committee of the Edinburgh Branch of the British Medical Association on the subject, I am thoroughly familiar with every phase of the controversy. I hold that no person, male or female, should be registered as an independent practitioner of midwifery, unless duly qualified under the Medical Act. In my opinion the solution of the question lies in the recognition by the Council of those hospitals which have the facilities for training midwifery nurses. These should be allowed to issue certificates of training to their own pupils and to no other. The issue of certificates of competence by private practitioners should be severely dealt with by the Council.

The next question of interest to the general practitioner is that of contract medical practice. I can see nothing essentially wrong in this. A professor accepts his chair and its duties at a fixed salary. Most remunerated appointments are at a similar fixed salary, and I can see no material difference in the contract of a general practitioner to attend a certain number of patients for a fixed sum per annum. The crux of the matter lies in the amount of remuneration, and I was very much impressed by the attitude of the representatives of the friendly societies who met with a committee of the Council of the British Medical Association. While declining to agree to any wage-limit they were ready to admit that the general rate of remuneration was too low and to use all their influence to raise it.

The position of the parochial medical officer in Scotland should be made more certain. The medical officer to a union district in England is appointed by, and is only dismissible by, the Local Government Board, and it is only just that the Scottish parochial medical officer should have the same security of tenure.

A good deal of attention has recently been drawn to the question of the dispensing and sale of drugs. On this matter I desire to make my position perfectly clear. In many districts it is absolutely necessary, and in others it is a long-established custom, for medical men to dispense the medicines which they prescribe for their patients. To this no possible objection can, it appears to me, be urged. The keeping of open shops for the sale of drugs, and even of patent medicines, to all and sundry is on quite a different footing and should not, in my opinion, be encouraged. What the Council has done is only to uphold the law which provides that poisonous drugs shall not be sold by unqualified persons. With their action I entirely agree.

There are many other matters of general medical interest, such as the suppression of unqualified practice, which, though of great importance, are outwith the province of the General Medical Council. For dealing with them, amendment of the present or a new Medical Act is requisite and desirable. In it there will necessarily be some reform of the Council, and probably some alteration of its composition. The number of Direct Representatives should be increased, some of the bodies which at present send representatives should cease to do so, and thirdly, the representatives of all the universities and corporations should be elected by a wider constituency than they are at present.

I think it is only right that I should state (for the information of those to whom I am not personally known) that I have considerable experience of affairs. I have been for several years a member of the Council of the Edinburgh Branch of the British Medical Association, I am now serving my second term as a member of the Central Council of the Association and its Parliamentary Bills Committee, and I am a member of the Finance Committee of the General Council of the University of Edinburgh.

My own personal experience in general practice has taught me the numerous difficulties associated with it, and the fact that I am no longer a general practitioner has not made me any less appreciative of these, any less anxious to see them removed, or I believe any less able to work for their removal.

If the profession in Scotland entrusts its interests to my care, I shall do my utmost to merit the confidence.

I am, Ladies and Gentlemen, yours obediently,

NORMAN WALKER.

We have also received an address delivered by Dr. C. W. Hayward at the Liverpool Medical Club on Wednesday evening, Nov. 6th. We cannot publish this address because it is in our judgment libellous. We make this explanation that it may not be thought that any other reason has persuaded us to deprive one of the candidates for election to the General Medical Council as a Direct Representative of an opportunity of addressing the constituency.

CANDIDATURE OF MR. GEORGE BROWN AND MR. GEORGE JACKSON.

Manchester and District Committee.

At a meeting of practitioners held on Friday afternoon, Nov. 8th, at the Deansgate Hotel, Dr. John Watson of Ardwick being in the chair, it was resolved to form a committee to take steps to secure the election of Mr. George Brown and Mr. George Jackson as Direct Representatives of the profession on the General Council of Medical Education and Registration. Already 50 representative general practitioners have joined the committee and the honorary secretary has received a large number of promises to support these two candidates. Dr. James Brassey Brierley is the chairman of the committee and Mr. G. H. Broadbent is the treasurer, while Dr. J. Percival Brown has undertaken the honorary secretaryship.

THE EAST SUBURBAN MEDICAL PROTECTION AND MEDICO-ETHICAL SOCIETY.

A MEETING under the auspices of the East Suburban Medical Protection and Medico-Ethical Society was held at Stratford, Essex, on Nov. 8th, under the presidency of Dr. F. J. Smith, to hear addresses from the candidates seeking election as Direct Representatives to the General Medical Council.

DR. SMITH said: It has been thought that the present occasion would be a good opportunity for the gentlemen who are wishing to represent the profession on the General Medical Council to come down and express their views, and I have to draw the attention of those would-be members who are before us to-day to the fact that inasmuch as all the candidates have expressed a wish to come the Executive Council have decided, as the only way to get the meeting finished within a reasonable time, that all the speakers who are candidates should have roughly from 15 to 20 minutes each in which to make their speeches. It will be in the power of any person present here to ask the candidates questions or to make observations on those speeches. If observations are made it will be necessary to restrict their length to two or three minutes. I trust you will bear with me if, from the chair, I make a little note of the time and remind you when the period has expired. I will first read you a letter from Dr. Glover—I presume it is written to Mr. F. B. Bromley. It runs as follows:—

"I think you know that I am medically prohibited from attending meetings at present. Therefore, I have reluctantly resolved, in deference to my friends, medical and other, to withdraw from the present contest. May I ask you to state this fact and to say to the meeting at Stratford how sorry I am not to be able to be present. I am announcing my determination to my constituents in the medical journals of this week.—With very kind regards, believe me, yours very truly, J. G. GLOVER."

I will say nothing more now, except to ask Mr. Victor Horsley to tell us anything that he wishes. Of course, he stands on a rather different platform from the other gentlemen, because he is not up for re-election, but remains a member of the General Medical Council for another year.

MR. VICTOR HORSLEY said: I would preface anything I have to say by thanking you for electing me to the General Medical Council four years ago, and I also take this opportunity to report to you that undoubtedly things are much better in the General Medical Council than they were four years ago. Distinct progress has been made in the Council on many salient points, notably in the so-called midwifery legislation, in matters of medical etiquette, and also to a less degree on the question of preliminary medical education. We have to look back, then, on a term which has been a fairly successful one, from our point of view, in regard to medical reform. As to the future, it does seem to me that unless we can secure a total revolution in the constitution of the Council we cannot hope to carry any measure in the Council itself under the four or five years' term of office which your Direct Representatives actually hold. We are all agreed that we must have a new Medical Act, but the General Medical Council, owing to its present constitution, is incapable either of really influencing the Government or of supporting in any way a real Act of medical reform. Where, then, is the outlet

pressure to come from which is to bring about this consummation? There is only one organisation which can supply that, and that is the British Medical Association. The present time is a critical one in the history of medical reform—in other words, it is a critical period for the British Medical Association. At the Cheltenham meeting of the British Medical Association the party of reform achieved a very great victory by carrying proposals of the Constitution Committee to revolutionise the British Medical Association, but unless you attend the statutory meetings which will be held next month—I suppose in Exeter Hall, which is a central place—to approve of the new articles and by-laws which must of necessity pass before that scheme can work—unless, I say, you attend that meeting in full force there is just a chance that the whole thing might fall to the ground, because the Companies Acts require that a three-fourths majority must be obtained in order to alter articles of association.

Dr. SMITH: If no one has any question to ask Mr. Horsley I will call upon Mr. George Brown to address you.

Mr. GEORGE BROWN: Mr. President and Gentlemen,—My views of medical reform must be familiar to most of you, and I think it is generally known that Mr. George Brown is, as my friend and colleague Dr. Glover described me at Cheltenham, "an ardent medical reformer." I think that ought to be sufficient. I will leave the general question of medical reform alone, simply saying that I shall be happy to answer any questions or remarks at the end of the meeting from anyone who requires further information. But before taking up the present election, which is the matter that we meet together to-day particularly to discuss, I should like to express my great regret at the cause which has prevented the appearance of Dr. Glover on this occasion. I had hoped to meet him here, and that he is absent on account of ill-health must be a matter of regret to all of us; for, after all, although of late I and many other medical reformers have not been able to agree with him, particularly with regard to the midwives question, I think we must all agree that he has done good service to medical practitioners. He has had 15 years of hard work on the General Medical Council, and under those circumstances I think he is entitled to the thanks and gratitude of the profession. As one who has supported him for years I feel grateful for the way in which he has for many years advocated our cause, and it was not until the rupture took place on the midwives question that I was obliged to tell him, as I did some 10 years ago, that unless he could bring something better forward I could not support him. I was a strong supporter of Dr. Glover's, but at the last election I felt it was absolutely necessary, if possible, to replace him by another candidate, one who was more in touch with the feelings of the rank and file of the profession. I may say that the feeling in regard to replacing him was not only my own but was almost the unanimous feeling on the part of the associations with which I am connected, especially the Incorporated Medical Practitioners' Association. And at the last election the members of that association nominated my friend, Mr. George Jackson of Plymouth, as one who was in perfect line with myself, not only upon the midwives question, but upon all other questions of medical reform. Mr. Jackson came forward almost at the eleventh hour, another candidate whom we had hoped to nominate for that election having retired, as it were, from the list. The result was a surprise to everyone. He had within a few hundreds as many votes as Dr. Glover—that is to say, over 4000—and he was highest on the list of unsuccessful candidates. Since that time Mr. Jackson has become very much better known. He had at that time the solid support of the South of England and I think also of all Wales, because the medical men there know him as a general practitioner. He has been a Poor-law medical officer, and he is a public vaccinator at the present time, and is in the active practice of his profession at Plymouth. Therefore he is an ideal man to represent us on the Medical Council. Since that time he has become personally much better known to the constituency generally; he has been present at public meetings in London on several occasions. He has travelled with myself from Plymouth to Newcastle in the North of England and done 1400 or 1500 miles—or perhaps more than that—in the last fortnight in prosecuting his candidature and endeavouring to serve you. In doing that he has shown his enthusiasm in the cause. For if Mr. Jackson is elected it means a tremendous sacrifice of practice. I have found that out by experience. I have been obliged to relinquish a certain class of work which runs into hundreds of pounds. My income has been very much reduced by representing you on the General Medical Council. But I do not mind that in discharging a public duty and I hope to carry it out. Now, why do I ask you to support my friend Mr. Jackson—and in doing so myself as well? Because we are general practitioners. The three Direct Representatives whom you now have the privilege of sending to the General Medical Council were granted in response to an urgent requisition from the societies representing general practitioners. Some 15 or 20 years ago I was secretary of a medical defence association for 10 years and this direct representation on the General Medical Council was the first item in our programme or platform. I had the honour of going with deputations to the Duke of Richmond and the Marquis of Ripon to represent on your behalf that we wanted the general practitioner element to be represented on the General Medical Council. In accordance with those frequent petitions and memorials which were sent the Government granted three Direct Representatives in the Bill of 1886. When that Bill was passed it was said that the Direct Representatives ought to be taken from the general practitioners of the country. But, unfortunately, the general practitioners were not prepared; we could not find anyone who was willing to sacrifice the time and incur the enormous expense which a fight of this kind meant. To appeal to 25,000 constituents means an enormous expense. In regard to that I should like to quote some remarks of the late Sir Andrew Clark of Cavendish-square who, when he was asked who should be the Direct Representatives, wrote as follows to the *British Medical Journal* of Sept. 25th, 1886:—

"And now that the interests of 'consultants' and of teachers, of corporations and of universities, of the Crown and of the people, are already more than adequately represented in the General Medical Council; now that the right of direct representation therein has been conceded to the repeatedly renewed claims of the general practitioners, it seems both natural and proper that they should themselves exercise the suffrage in their own behalf; that they should elect as their representatives genuine working members of their own body, men who, commanding the confidence of their brethren, are familiar with the history of our struggles for medical reform, who understand in education and polity the points which have yet to be won, who are zealous in adding to the value of the services which we render to society and the State, and who, in spite of every kind of opposition, will remain loyal to the highest interests of the profession. If this principle of election is disregarded, and if all the representatives are chosen from outside the body of general practitioners, it will seem, at least to me, that the fight has been fought, and the battle won, in vain."

I adopt these words from Sir Andrew Clark and I say that unless you send general practitioners to the Council, no matter where you get them from—the East-end, or Devonshire, or Cornwall, or Lancashire, the district from which Dr. Woodcock hails—unless you send general practitioners to the General Medical Council you will not make progress with medical reform. The few remaining years I have to give to medical reform and medical politics will be devoted to carrying out that principle among general practitioners. I value the services of Mr. Victor Horsley upon that Council as much as any man can do. As I said at the Newcastle meeting, my only regret is that he is not a general practitioner; he does not know our personal experiences, our trials and feelings and our difficulties, and he has to repeat them second-hand, though that is excellently well done. I do hope, gentlemen, you will bear this in mind in the future. There is another matter, and that is, I ask you not to lack interest in this coming election. I have tried again and again whilst a member of the Council to get my colleagues to consider the principle given by Act of Parliament to have one additional representative for England. But that has been refused by an overwhelming majority. What is the sole reason why this has been refused by the Council? They say, "because the medical profession does not take an interest in the representation at the present time, they do not vote for the candidates when the election comes round. Actually only about 50 per cent. take the trouble to vote." Do not let that fact be put before us again. Do not let them say, "Mr. Brown, or Mr. Victor Horsley, or Mr. Jackson, it is no good asking for more direct representation; let the profession appreciate the members they have got." That is the reason I ask you not only to vote yourselves but to go round and ask your neighbours and friends, "Have you got your paper? Go and fill it up and send it off." Remember that numbers count in a matter of this kind. Turning to another point, you perhaps know that my right to claim your suffrages has been somewhat contested. I think it has been done on two grounds. First, and a view which has been made a very very great deal of, it is because I happen to reside in London. That, I suppose, is my misfortune. I wish I could have lived in the country and enjoyed fishing and shooting and so on. But I am in London. I have anticipations more or less in regard to the future as to being able to take my case in the country, but at the present time I must work, and work hard, in London as a general practitioner. If in 1895 my residence in London was not considered a disqualification I want to know why it is to be brought forward now as a disqualification to represent you. My politics have not changed and therefore I think I can appeal to you to support me. I admit it does seem rather out of the regular and proper order of things that the three Direct Representatives are all residing in London. But who is responsible for that? We might say it is primarily the fault of the electors. But let us take our minds back to 1897 when Dr. Rentoul of Liverpool resigned. At that time Dr. Glover and myself, two Londoners, represented you on the Council. Dr. Woodcock, at Cheltenham, if I remembered rightly, stated: "We in the north claim a representative, we ought to have a representative in the north." I say, have a representative in the north certainly if the right man is forthcoming in accordance with your principles. But if that is Dr. Woodcock's opinion now, why was not it his opinion in 1897 when the Lancashire and Cheshire Branch met to consider who was to be nominated to take the seat of Dr. Rentoul who resigned? They looked all round and discussed the *pros* and *cons* of every practitioner in Manchester, and there were many there, including my friend Dr. Woodcock, who would have been very happy to represent Lancashire at that time. Dr. Woodcock and his friends supported Mr. Victor Horsley, and threw over Dr. Rentoul and the north altogether, and they put in a third man who was a Londoner. I say, if we have too many Londoners, let the last one, the one who came last, give way. Do not come upon poor George Brown, who has fought his seat for 15 years; do not have him out because he is unfortunately a Londoner, because if that is a disqualification I will live anywhere I can get. Do not, for goodness' sake, throw that up at me and pick me out and take me out of an office which you put me in. I appreciate the honour and I have tried to serve you to the best of my ability. I admit my failings; I admit, as Dr. Glover said at Cheltenham, that sometimes George Brown happens to be in that unfortunate position in which he cannot get a seconder. That is because on the last May session of the General Medical Council I brought forward a resolution based on the memorial of the Middlesbrough and Wigan medical unions and numerous letters from Durham and Newcastle and other places in the north urging me to bring forward a resolution to make it a matter of unprofessional conduct for a man to associate himself with a touting or medical aid association. I did not draft the resolution; it was sent to me from the North of England. A memorial was sent to the Executive Committee of the General Medical Council at the same time urging them to bring it forward. I complied with the mandate of my constituents, but no one would second my resolution. I say more shame to the representatives, especially to the Direct Representatives, that they did not second that resolution. I know the answer is that it was *ultra vires*. I have, however, no doubt whatever that legal advice had been taken as to whether my resolution was in order, and, at any rate, its appearance upon the agenda of the business for that day, showed *ipso facto* that it was in order and a thing which could properly be discussed. Moreover, the Lord Chief Justice in the Appeal Court said that any matter of medical discipline came within the cognisance of the General Medical Council if they chose to discuss it, and that they could make their own rules as to the conduct of medical men. There have been plenty of those cases. Take the celebrated Irvine case. This was practically a case of a touting institute; there were others which were on all fours with it, but that was a case of a consultant. When it is a case of a general practitioner it is pitched out. But as it was a consultant and the matter was brought forward by Dr. Saundby of Birmingham it was carried through. But when I brought forward my case the Council said, "Out with it," and I could not get a seconder for it. But, is that a reason why I should be sent away from the Council? I say

No; it is a reason why you should send me back again. But if you do send me back again to propose resolutions of that sort I hope you will send also someone there who will second the resolution. And if you return Mr. Jackson it shall never be thrown up against me that I proposed resolutions to the Council of such an impracticable character that I could not get a seconder.

Dr. SMITH: As no one asks any questions I take it that you all agree with Mr. George Brown's views. I will now call upon Mr. Jackson to address you.

Mr. GEORGE JACKSON: Mr. President and Gentlemen,—I do not propose to say anything about the personal question of my being a general practitioner; Mr. Brown has explained that for me. He has told you that I am in general practice and I hold appointments such as general practitioners hold, one being that of public vaccinator. In addition to that I was for many years Poor-law medical officer and have filled the various appointments which medical men usually have. I think, therefore, I may claim that I very fairly understand where the shoe pinches as far as the general practitioner is concerned. Of course, a man going to the General Medical Council should represent all classes. There is no doubt about that. At the same time the Direct Representative should represent more especially the general practitioner because the consultants may be said to be more especially represented by those who represent the corporations, and as a rule one may say that corporation representatives are consultants. So I think that Direct Representatives should certainly be considered, more especially representatives of the general practitioners. As I have said, I simply claim that I am one of the general practitioners. You have all heard Mr. Brown, and he really gives my views pretty well, but I will just make a few remarks to amplify them, and I will take *seriatim* the points which I have put down as, in my opinion, the most necessary. To begin with, we must have some reform of the Medical Acts, and before you begin to reform the first step will be to reform the Council itself. There are many points in which the interests of the corporations and the interests of the general practitioners do not agree, and, in addition to this difficulty, the consultants who represent the corporations are not in touch with the general mass of general practitioners as they do not know where their difficulties lie. My scheme for reforming the constitution of the Council would be to limit the numbers of the representatives of the corporations. Perhaps it might be done by grouping the Royal Colleges of Surgeons of England and Physicians of London and the Apothecaries' Hall of London, so that instead of three representatives for those bodies they should have one. So also with regard to the Universities of Oxford and Cambridge; they might be grouped and then there would be more room for Direct Representatives. Then the number of representatives might be reduced. 25 would probably be sufficient—that is to say, 15 for England and Wales, five for Ireland, and five for Scotland. Then the Direct Representatives should be for different districts, so that it should not be necessary for, say, Dr. Woodcock to come from Manchester or for me to come from Plymouth to address medical practitioners in London. One cannot possibly be in touch with 23,000 medical men. It is absolutely impossible; whereas if the country were cut up into divisions we could more easily become acquainted with the different parts of our divisions and be more in touch with the constituency. I might say, as very often is the case, the Colonies show us the way. In Canada there are 18 Direct Representatives and 16 representatives for corporations, and, if I am not misinformed, those 18 represent various districts; they are not elected by the whole mass of the medical men resident in the Dominion. So I think we may in that respect take a leaf out of the book of Canada. Of course, with reform of the Medical Acts there will be other points which special attention should be paid to. One would be the extreme importance, in whatever Medical Act is passed, of making the General Medical Council supreme in matters relating to education. At the present time they are not. They can only recommend; they have no power to compel. At the present time, as probably you have read, there is a deadlock between the Royal College of Surgeons of England and the Royal College of Physicians of London and the Council on that point. The Council said five years was to be the time requisite for anyone to acquire the necessary knowledge to become a medical practitioner. The Colleges acceded to it, but they tried to take away with one hand what they gave with the other by saying that the first year may be passed by a lad at a higher grade school or technical school and that it should not necessarily be five years at a medical school, as the Council intended. The Council also requires more power to deal with other subjects that Mr. Brown referred to—that is to say, the holding of appointments in connexion with touting institutions. They have passed resolutions disapproving it, but they have not been able to declare it infamous in a professional respect. They also require to have power to deal with men who represent themselves to be medical men by subterfuges, such as a man putting up a brass plate and calling himself an aurist, and another, such as I have in my mind at present, calling himself an oculist. No one can touch him because he does not claim that he is a physician or a surgeon; he is not on the Register and he does not profess to be, but he deceives the public all the same. There are other things which the Council can deal with, but there again they are hampered by not having complete power to compel; for instance, I think it would be very desirable if the standard of entrance into the medical profession were raised. Dr. W. Gordon of Exeter has a paper about it in the *British Medical Journal* this week in which he goes into details and shows numerous bodies which have power in the matter. The General Medical Council itself should institute an examination in preliminary subjects, which should include English, English literature, especially various English subjects, one modern language, and such subjects as chemistry and physics. There ought to be a uniform examination for entrance into the medical profession, to be held at different centres at such times as might be convenient, and the age of entrance should be 17 years, whereas at present it is only 16 years. That would bring the student up to the age of 22 years by the time he became qualified, which is quite young enough for a medical practitioner. That would be a very important reform and that may be done without any further Act. So much for entrance into the medical profession, and it will be as important to provide that there should be a one-portal system for qualifying. The professional examination should be of a uniform character. It would be open to anyone who wished to obtain degrees or ornamental diplomas afterwards to do so, but let there be one standard examination for the three kingdoms. No doubt that question would raise most strenuous opposition on the part of the members of the Council who are representatives of corporations. I come now to what unfortunately is a very burning question, and one upon which there is a good deal of difference of opinion, and that is the midwives matter. It seems to me to be wicked to attempt to legalise any old woman who can produce a certificate to say she has attended midwifery cases for two years. They would not do that for medical men. When the first Act was passed in 1856 there were certain medical men who had no qualifications whatever, but were placed on the Register because they had been in practice since 1815. These people, however, propose to admit every old woman who has been doing any midwifery. That is monstrous, and I should be strongly against any attempt to register persons of that class, and I have always been so. My own opinion is that the question is better met by a Bill to register all nurses, who should have at least three years' training, and that those who wish to be obstetric nurses might be so, but that their work should be done under the control of the medical men. It has been my fortune, or misfortune, to be a Poor-law medical officer years ago, and I found very great difficulty in treating to the satisfaction of myself or with good to the patients very many cases which came under my care, because, although the law insisted upon my being there it did not insist on there being any nurses. I think that providing the nurse is for the poor even more important than providing the medical man, to see that sanitary regulations are carried out and the instructions of the medical man also. I cannot see why the plan might not be made universal all over the country, as I believe it is in a place called Saddleworth, in Warwickshire, where the guardians provide nurses, and if possible the people pay for them afterwards and thus have the nurses on loan. And then the nurses come strictly under the control of the medical men and they do not act independently, especially in midwifery cases. I think that if a Bill could be drafted on those lines it would be a good thing, and I think it would be a very good thing if such an Association as the British Medical Association, to which as Mr. Horsley has said we must look to make these reforms, were to draft a Bill to be introduced into Parliament as a competing Bill with the Bill which has been before the House. In the last paragraph of my address I have said: "I have assisted in the work of establishing the Three Towns (Plymouth, Devonport, and Stonehouse) Provident Dispensary in conjunction with the branch of the Incorporated Medical Practitioners' Association, which works on the principle of a wage-limit, the management being in the hands of the members of the staff." That, I take it, is the way in which the club system might be combated. Medical men might, as they have done at Eastbourne, form provident dispensaries on those lines. But if they allowed that dispensary to drift into the hands of a lay committee who sweated the medical men I should be against it. As you know, the various large societies, such as the Oddfellows and the Foresters, will not discuss the question of a wage-limit. The only thing would be to say that if you will not have a wage-limit you must pay us a great deal more so as to meet that objection.

At the conclusion of Mr. Jackson's address Dr. Smith complained that a youth, aged about 18 years, who had matriculated with a first-class at London University, had, nevertheless, been refused registration as a medical student by the General Medical Council, only on the ground that he did not pass in one of the modern languages.

Dr. SMITH then called on Dr. Woodcock to speak.

Dr. S. WOODCOCK: Mr. Chairman and Gentlemen,—With regard to the things which are of immediate importance, I think the question of law between the Royal Colleges and the General Medical Council is one of great importance. I agree with Mr. Jackson that the General Medical Council are not in possession of a legal right to enforce their conditions upon the Royal Colleges. The fact is that at the time the General Medical Council was established they voluntarily surrendered the right to determine themselves what should be regarded as necessary before the student could be registered. The arrangement answered fairly well while there was a sort of unanimity existing. But the Royal Colleges not having the number of candidates which they think they ought to have are trying to make arrangements which, as Mr. Jackson says, enable a boy to spend a certain time at school before his registration which shall be reckoned in the five years' curriculum. I think that it would be a most unfortunate thing if that were done and that we must hold on to the five years' curriculum *after* registration. With regard to the conditions under which a boy or young man can become registered as a medical student, I agree with the suggestions made by Dr. Gordon and with the series of resolutions passed at the Council of the British Medical Association, of which I happen to be a member. I think 17 years should be the minimum age for commencing medical study, and I think it would be of the utmost importance, if it could be done, that the General Medical Council should establish some uniform examinations which could be held simultaneously at various centres, and that there should be one portal of entrance to the avenue which leads to professional life. With regard to the question of medical aid societies, it appears to me that the General Medical Council has no power to issue any sort of general edict which will prohibit men from accepting appointments in connexion with these associations, but if local organisations can prove that a man has been, or is, connected with an association of this kind which is guilty of touting or advertising the Council is prepared to deal with a man under those circumstances. I think that is satisfactory and, as has been pointed out, it was satisfactory in the case of Dr. Irvine. Again, a man may, in private practice, introduce himself to the public by advertising and issuing handbills, and yet that is not noticed. Now, with regard to the midwives question, I am entirely opposed to registration of midwives as independent practitioners, and I have from the first opposed people who have advocated legislation on the lines suggested by what is called the Midwives Committee. In dealing with this question one has been forced to this conclusion, and it was forced upon me by advice given to me by Members of the Houses of Parliament. You ought to have some alternative scheme. It is no good your standing by and saying you do not approve of this. What do you approve of? I was connected with the Parliamentary Bills Committee of the British Medical Association, and the late Mr. Ernest Hart, who was a very astute man and had large experience of Parliamentary work, requested that a sub-committee should be appointed, and of that Mr. Horsley was chairman and Mr. Brown was a member as well as myself, and it was suggested that we should deal with this question and that we should draft an alternative scheme. We did this,

but we did it in a hurry and, like most things done in a hurry, it was not done well. We said, first of all, that the women should be called obstetric nurses or midwifery nurses, that nursing duties should be imposed upon such nurses, and that their functions should be strictly limited. We had a most rigid appendix added which indicated the conditions under which the nurse was to call in medical aid. I now think that we should go further and that we ought to have some sort of legislation which shall secure the attendance of a registered practitioner in cases of confinement. But I have not seen any other alternative scheme which has been good in my judgment. There was a scheme suggested by Dr. Bedford Fenwick when Mr. George Brown was connected with the *Medical Times and Hospital Gazette* and that scheme was published. But there was this significant comment in that paper to which I have alluded, something which aroused my suspicion: "It appears to us that the consequence would be that many medical men would gladly employ nurses so efficiently trained in attendance upon their poor and parish patients, knowing that such parturient women would therefore receive every care and attention, and in the event of any abnormality showing itself medical assistance would be immediately summoned." This is imposing the responsibility of diagnosing an abnormality on the nurse or midwife; she was apparently to determine when a medical man was to be called in. This was very much like the reintroduction of the unqualified assistant in petticoats. What has been alluded to as occurring in Saddleworth goes a little further than that. I should like to read you what is called a draft scheme, merely suggestions from the Manchester Medical Guild. It is a very difficult thing making a suggestion in drawing up an Act which is likely to prove acceptable to Parliament. The preamble is that in view of the fact that the high mortality and morbidity amongst parturient women and the newly-born in the poorer classes are undoubtedly due to their being attended by ignorant untrained women and their not having the services of fully-qualified practitioners, the committee are of opinion that legislation is urgently required with the sole object of putting within reach of the poorer classes the assistance both of trained nurses and of qualified medical practitioners. The scheme is that obstetric nurses should be adequately trained and registered, and that they should be employed by the local authority and should have facility for calling in any medical man in the neighbourhood, and that he should be paid by the State. I think that the State should make provision for the adequate remuneration of the medical men who are expected to assist women of this kind—whether these women practise as at present in an unfettered sort of way or whether some scheme is introduced whereby they should be registered in some way. I think strongly that local committees should be formed all over the country for the local administration of the scheme, that each local committee should engage one or more registered obstetric nurses, and that they should issue to each suitable certificates and instructions. The only point upon which I have a strong objection to this scheme is this, that the woman who is attending the case determines what practitioner shall be called in. I do not think it is right that these women should be able to attach themselves to one medical man and that it should be said that Dr. So-and-So follows Mrs. So-and-So. I think every patient should decide what practitioner shall be called in to her case. Let us in any case look at the matter in a practical way; let us have a scheme whereby the safety of the public shall be secured and the interests of the profession protected, and to which it may be likely that Parliament will lend an ear, and then we shall have some influence in guiding the legislation which may take place in the near future.

A discussion followed, in which Dr. SMITH, Mr. F. E. BROMLEY, and Mr. R. F. TOMLIN took part, and Mr. BROWN and Dr. WOODCOCK replied, Mr. JACKSON having been compelled to leave early for the purpose of returning to Plymouth. Mr. Brown denied his responsibility for the article about midwifery nursing in the *Medical Times and Hospital Gazette*.

The meeting terminated with the usual votes of thanks to the President (Dr. Smith) and to the speakers, which were suitably acknowledged.

SANITARY AFFAIRS AND THEIR ADMINISTRATION IN WEYMOUTH.

CONSIDERABLE discussion took place in our columns a short while ago concerning the use of isolation hospitals in dealing with scarlet fever and the advantages which these hospitals afford both in safeguarding the community against the disease and in benefiting the individual patient. As we then insisted, much depends upon what is meant by isolation in hospital and how it is utilised. A report to the Local Government Board by Dr. R. D. Sweeting, affords a striking example of what to avoid in this matter. In Weymouth from February, 1900, to March, 1901, 168 cases of scarlet fever were notified, and of these no less than 116 were removed to hospital. The hospital in question belongs, not to the Town Council of Weymouth, but to the Weymouth Port Sanitary Authority, which undertakes to receive cases from the town on certain terms. It contains four wards of six beds each, and an observation ward intended for one bed—25 beds in all. Into this hospital in December last as many as 43 scarlet-fever patients were newly admitted from Weymouth, while cases were also being taken from outside districts, with the result that at one time 72 patients were crowded into the wards and nurses' rooms, and children were packed two in a bed. The staffing of the hospital was altogether inadequate. The caretaker's wife was paid by salary, out of which it was her duty to provide nurses, and the result of this amazing arrangement may be guessed. Only one trained nurse was engaged, the rest of the "nursing staff" being merely amateur helpers. It is scarcely surprising that the condition of the hospital in these circumstances became little short of a scandal. Parents, moreover, were required to undertake to repay the cost of the maintenance of their children, and the nature of the demands made for this purpose gave rise to much dissatisfaction. An establishment charge of 10*s.* 6*d.* a week was made for each patient and in addition the food was in each case charged for in separate items by the caretaker, who sent separate orders to each tradesman each day for each patient. Patients' friends were allowed to visit the hospital at will, and these visitors in several instances appeared to have contracted scarlet fever. At least four patients were sent home while still desquamating and "return cases" resulted. The extraordinary part of the story is that all this time the most strenuous efforts were being made by the medical officer of health of the borough to compel every notified case of scarlet fever to be "isolated" in this hospital. Justices' orders for compulsory removal were sought and obtained, and in better-class houses the medical officer went so far as to inform the householders that unless they consented to the notified scarlet fever case going to hospital it would be necessary for him to insist on the dismissal of the domestic servants. In this matter it is quite clear that zeal was allowed to outrun both authority and discretion, and it is not surprising that as a result both the profession and the public in Weymouth have made a determined protest. As Dr. Sweeting points out, it is to be feared that it will be a long while before the educated classes of Weymouth will recover their faith in hospital isolation, and hence the task of establishing a satisfactory municipal hospital for Weymouth will be very difficult. A sanitary authority that can tolerate such a state of things is hardly likely to be found doing efficient work in other directions, and this view is confirmed by the account which Dr. Sweeting gives of the sanitary condition and administration of Weymouth. The town council appears to have been deaf to representations about insanitary house property and to take no care in the supervision of the building of new dwellings. Defects of house drainage are reported as being common, the system of collecting refuse is unsatisfactory, by-laws and regulations as to slaughter-houses, lodging-houses, and dairies are not enforced, and the work of the inspector in the sanitary department is stated to be unsatisfactory in many respects. A watering-place which is largely frequented by visitors has an exceptional obligation to perfect its sanitary organisation, and Dr. Sweeting's report will hardly encourage careful people to stay at Weymouth until substantial reform is assured.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the College was held on Nov. 5th, Dr. FRASER, the President, being in the chair.—The PRESIDENT communicated a letter which he had received from the Secretary of State for Scotland in acknowledgment of the message of condolence sent by the College to His Majesty the King on the occasion of the death of the Dowager Empress Frederick of Germany, and a similar acknowledgment from Count Metternich in response to the message sent to the German Emperor.—The PRESIDENT referred in sympathetic terms to the loss which the College had sustained through the death of two Fellows of the College—Dr. John Connel and Dr. James Foulis.—Dr. David Graham, M.R.C.P. Edin., was admitted by ballot to the Fellowship of the College, and the following candidates were admitted to the Membership of the College after examination: Harold Sherman Ballantyne, M.B., C.M.Edin.; David Whiteside Maclagan, M.B., Ch.B.Edin.; and Guy Verney Fletcher, L.R.C.P., L.R.C.S. Edin.—By vote of the College Richard Wallace was deprived of his licence to practise as granted by the College and of all his rights and privileges as Licentiate.

DRAINAGE OF FALMOUTH.—An inquiry was held at Falmouth on Nov. 7th by Mr. E. A. Fawcett of the Local Government Board with regard to the application of the corporation to borrow over £18,000 for sewerage purposes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6554 births and 4336 deaths were registered during the week ending Nov. 9th. The annual rate of mortality in these towns, which had been 16·7 and 17·6 per 1000 in the two preceding weeks, further increased last week to 19·7 per 1000. In London the death-rate was equal to 19·4 per 1000, while it averaged 20·0 per 1000 in the 32 large provincial towns. The lowest death-rates in these towns were 11·0 in Wolverhampton, 12·6 in Plymouth, 13·8 in Derby, and 14·2 in Leicester; the highest rates were 25·3 in Blackburn, 25·9 in Manchester, 26·1 in Salford, and 26·7 in Sheffield. The 4336 deaths in these large towns last week included 442 which were referred to the principal zymotic diseases, against 468, 396, and 371 in the three preceding weeks; of these 111 resulted from measles, 88 from diphtheria, 85 from diarrhœal diseases, 51 from scarlet fever, 50 from "fever" (principally enteric), 41 from whooping-cough, and 16 from small-pox. The lowest death-rates from these diseases were recorded in Bristol, Leicester, Derby, and Huddersfield, and the highest rates in Burnley, Blackburn, Preston, and Sheffield. The greatest proportional mortality from measles occurred in West Ham, Norwich, Oldham, Blackburn, and Sheffield; from scarlet fever in Bolton and Preston; from whooping-cough in Newcastle; from "fever" in Derby; and from diarrhœal diseases in Plymouth, Liverpool, Burnley, Preston, and Gateshead. The 88 deaths from diphtheria included 33 in London, seven in Sheffield, six in Burnley, five in Liverpool, and five in West Ham. Sixteen fatal cases of small-pox were registered in London, but not one in any of the 32 large provincial towns. There were 297 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Nov. 9th, against 172, 180, and 284 at the end of the three preceding weeks; 62 new cases were admitted during the week, against 47, 57, and 169 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had risen from 2994 to 3392 at the end of the nine preceding weeks, had declined again to 3331 on Saturday last; 380 new cases were admitted during the week, against 404, 400, and 425 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 196, 242, and 327 in the three preceding weeks, further rose last week to 445, and were 75 above the corrected average. The causes of 55, or 1·3 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, and in 13 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had risen from 14·5 to 19·9 per 1000 in the five preceding weeks, further increased to 21·7 per 1000 during the week ending Nov. 9th, and was 2·3 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 13·7 in Greenock and 18·1 in Leith, to 23·7 in Perth and 24·2 in Glasgow and in Dundee. The 692 deaths in these towns included 24 which were referred to measles, 23 to diarrhœa, 16 to whooping-cough, 16 to "fever," six to diphtheria, and five to scarlet fever. In all, 90 deaths resulted from these principal zymotic diseases last week, against 69 and 79 in the two preceding weeks. These 90 deaths were equal to an annual rate of 2·8 per 1000, which was 0·8 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 12 and 14 in the two preceding weeks, further rose last week to 24, of which 19 occurred in Glasgow, and four in Dundee. The deaths from diarrhœa, which had been 27 and 32 in the two preceding weeks, declined again to 23 last week, and included 10 in Glasgow, six in Dundee, three in Aberdeen, and two in Edinburgh. The fatal cases of whooping-cough, which had been 12, eight, and five in the three preceding weeks, increased last week to 16, of which 12 were registered in Glasgow and two in Dundee. The deaths referred to different forms of "fever," which had been five, 13, and 14 in the three preceding weeks, further rose to 16 last week, and included 12 in Glasgow and two in Paisley. The fatal cases of diphtheria, which had been five and nine in the two preceding weeks, declined again last week to six, of which five occurred in Glasgow, where two of the five deaths from scarlet fever were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 133 in each of the two preceding weeks, increased last week to 162, and were 12 in excess of the number in the corresponding period of last year. The causes of 24, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·9, 19·3, and 22·7 per 1000 in the three preceding weeks, further rose to 23·2 per 1000 during the week ending Nov. 9th. During the past four weeks the death-rate has averaged 21·3 per 1000, the rates during the same period being 17·2 in London and 16·9 in Edinburgh. The 167 deaths of persons belonging to Dublin registered during the week under notice were four in excess of the number in the preceding week, and included five which were referred to the principal zymotic diseases, against nine and 19 in the two preceding weeks; of these, two resulted from "fever," two from diarrhœa, and one from whooping-cough. These five deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rate during the same period being 1·6 in London and 1·0 in Edinburgh. The fatal cases of diarrhœa, which had been four and nine in the two preceding weeks, declined again last week to two. The two deaths from "fever" showed a considerable decrease from the numbers in recent weeks. The 167 deaths in Dublin last week included 34 of children under one year of age and 44 of persons aged upwards of 60 years; the deaths of infants showed a marked decline, but those of elderly persons slightly exceeded the number in the preceding week. Six inquest cases and six deaths from violence were registered during the week, and 45, or more than one-fourth, of the deaths occurred in public institutions. The causes of 14, or more than 8 per cent., of the deaths in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeons: H. E. South to the *Rupert* and E. B. Pickthorn to the *Boscawen*. Surgeon H. A. Julius to the *Pembroke*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain H. C. Lamport to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 3rd Middlesex: Surgeon-Lieutenant P. Wood to be Surgeon-Captain.

SOUTH AFRICAN WAR NOTES.

Civil Surgeon E. C. Osborn is reported to have been accidentally slightly injured (fractured clavicle) at Volksrust on Nov. 9th.

SANITARY TACTICS.

An important work on medical service in war time has recently been published in two volumes 12mo by Rueff of Paris, the author being Dr. Benech, principal medical officer of the first class and formerly a professor at the École de Guerre. In his introduction Dr. Benech apologises for making use of the phrase "sanitary tactics" to indicate the complex procedure by means of which the medical department is enabled to "conserve its contacts" with the rest of the army, but doubtless many of his readers will regard the expression as a happy one. In the sub-title Dr. Benech describes his book as intended for the use not only of medical officers but also of officers on the staff. On a campaign the duties of both classes overlap continually, and accordingly his object is to throw as much light as possible upon "this zone of penetration." In order to avoid loss of time and the improper utilisation of means the director of the medical service, who generally speaking will have been present when the disposition of the units composing the force was arranged, being acquainted with the views of the commander should apportion the field of

battle into two or three sections according to circumstances, placing each section under a divisional medical officer if available, or in his absence under the officer next in rank. He should distribute between these sections the whole of the sanitary *personnel*, equipment, and appliances, whether belonging to corps, units, ambulances, or hospitals, having regard to the requirements in each case and being guided by the information which he has received. It should be in his power, moreover, to modify this distribution subsequently if any unforeseen contingencies should arise; and in like manner the officers in charge of sections should give effect to such minor modifications as may seem to them to be necessary. Dr. Benech in the next place proceeds to lay down the law on an important point. Who, he asks, should have the command on the field of battle after the combating force has been moved away from it? Who should represent supreme authority in this domain of sickness and of death? Clearly, he continues, the chief authority in such a case must necessarily be vested in a medical officer, and it is on the individual at the head of the "evacuation" hospital that this duty naturally devolves. The principal medical officer accompanies headquarters; the chief medical officer of the lines of communication has to attend the general officer, whose technical adviser he is; the officer in charge of the evacuation hospital being the chief medical official on the spot should have control over the field of battle and its vicinity, the limits of his jurisdiction and also his place of abode being determined by the Commander-in-Chief. In addition to his normal duty with the evacuation hospital this medical officer should have command over all the field and auxiliary hospitals which may have been detached from the front and should be responsible also for the following duties: the burial of the dead and the general sanitation of the locality; the formation and despatch of convoys for the sick and wounded; and the preparation of requisitions for auxiliary *personnel*, *matériel*, and supplies of every sort, including vehicles for transport, clothing, and food. Dr. Benech's volumes contain much to repay perusal.

ARMY ADMINISTRATION.

Under the above heading we briefly called attention last week to the new Order in Council defining the position and duties of the principal officers who are, under the War Minister, charged with the administration of the different departments of the army. It is an important Order, inasmuch as it is not only the first of the promised changes in War Office reform but, as far as the Army Medical Service is concerned, it is the first time that the Director-General of that service has been thus recognised as the head of a department and an officer of the headquarters staff having direct access to the Secretary of State for War. The new Order in Council should be read and considered in connexion with our leading article on the scheme of War Office reform (*vide* THE LANCET, Oct. 26th, p. 1132). The position of the present Commander-in-Chief under the new Order differs somewhat, but not very materially—except as regards the *personnel* of the army and the Adjutant-General's department—from that occupied by his predecessor, Lord Wolseley, under the Orders in Council of 1888 and 1895. As we pointed out, everything and everybody connected with the army comes under the Commander-in-Chief as its head, and under the new Order in Council falls within one or other of two categories—namely, under the direct control or simply under the supervision of the Commander-in-Chief. The Director-General of the Army Medical Department discharges the duties of his office under the "supervision" of the Commander-in-Chief, and has right of access to, and power to advise, the Secretary of State on all matters appertaining to his department and the sanitary state of the army. It remains to be seen practically how the new order of things and the newly-constituted War Office boards will work, but there can be no doubt that the head of the Army Medical Service will henceforth occupy a new and a more important and influential position than has hitherto been the case.

LORD ROBERTS AND THE PORTLAND HOSPITAL.

Lord Roberts presented medals to the staff of the Portland Hospital and to members of the Welbeck Ambulance Division who have returned from duty in South Africa in the riding school at Welbeck, Nottinghamshire, on Nov. 8th. After the presentation the Duke of Portland, on behalf of the hospital staff, thanked General Eaton for the great work which he did in helping to organise the hospital, and Mr. Langman who kindly gave his services as treasurer and afterwards equipped a hospital at his own expense and took it out to South Africa. Lord Roberts said that he remembered well when the Portland Hospital reached Bloemfontein how glad he was to get the assistance of a well-organised hospital fitted out in every way complete with doctors, nurses, and men who knew how to deal properly with those who were wounded or sick. The Portland Hospital and the Langman Hospital came out to South Africa at the same time and it rejoiced his heart to get such able assistance, for at that time they had something like 6000 cases of enteric fever on hand in the few months during which they had been there. But for the aid afforded by private sources they would have been in great straits. These men who went out to South Africa in the position they did deserved the greatest possible credit, because they had not the incentive of the Yeomanry and the Volunteers to turn out in the same way. There was none of the excitement of war in their case. They went to do the work of tending the sick and wounded, and he was thankful to note how cheerful and willing they were to do that work.

SOUTH AFRICA.

The casualty returns recently received from South Africa, in addition to recording the losses sustained in the attack on Colonel Benson's column, show some increase of sickness, although not to any great extent, among the British troops. There is otherwise little of medical interest in the news from the seat of war. Reinforcements are being steadily sent out from this country to South Africa. The military news would indicate that we must now look to the annexed territories for coming events. It is interesting to notice that Lord Kitchener reports that General De Wet has reappeared in the field in the North-Eastern Orange Colony.

THE BIRTHDAY HONOURS.

Lieutenant-Colonel G. H. D. Gimlette, I.M.S., is appointed to be a Companion of the Order of the Bath.

The King has been pleased to approve of the grant of the Kaisar-I-Hind Gold Medal to Major Herbert Edward Deane, R.A.M.C., to Major Thomas Edward Dyson, I.M.S., to Lieutenant-Colonel James McCloghry, I.M.S., and to Captain Edmund Wilkinson, I.M.S.

Correspondence.

"Audi alteram partem."

DR. GLOVER'S RETIREMENT FROM THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—On the subject of retirement from my candidature for the office of Direct Representative I am receiving a number of letters to which I can give no adequate immediate answer. It will be good if you will allow me through your columns to ask my friends to excuse me if there should be some delay in my reply to their most kind communications.

I am, Sirs, yours faithfully,

25, Highbury-place, N. JAMES GREY GLOVER.

THE ETHICS OF THE PUBLIC VACCINATOR.

To the Editors of THE LANCET.

SIRS,—The inclosed cutting is taken from the *Standard* of Nov. 9th. It is little to be wondered at that you have so frequently in your columns letters complaining of the conduct of public vaccinators with regard to the patients of other medical men, when we see such a production as this allowed to appear in the daily press under the authority of the organising secretary of the Association of Public Vaccinators. The first two sections are bad enough, but what can the third section be taken to imply, except (*a*) that the medical practitioner who is not a public vaccinator is likely not to use reasonable safeguards in the performance of vaccination, and (*b*) that he is likely not to use good sound lymph for the work,

I have no particular grievance against any individual public vaccinator; but there is a way of talking about "free" vaccination which seems to imply that it is done gratis; whereas, on the contrary, in many districts the public vaccinators are well paid for the work; and not only so, but the expense of this payment has to be, in part, borne by the very men who suffer when the unscrupulous public vaccinator persuades patients to have the vaccination done "free," rather than allow them to pay the moderate fee of their usual medical attendant. On this point it would be interesting to have the return of fees paid to public vaccinators which your correspondent "General Practitioner" asked for in THE LANCET of Nov. 9th, p. 1300.

Nothing to my mind would be more desirable than universal vaccination and revaccination. But I cannot help thinking that this vaccination Utopia would be nearer of realisation if some change were made in the system of public vaccination. Every medical man should be allowed to claim his fees from the Guardians for the vaccination of his poorer patients, and if the Local Government Board are in earnest on the subject they should be prepared to supply lymph, not necessarily gratis, to any practitioner requiring it. Another alternative would be to appoint a number of public vaccinators *who should not be allowed to engage in private practice* in the neighbourhood in which they hold office. The first suggestion is, I think, the better; but either of these systems would obviate the feeling which must arise in the mind of many general practitioners, that the public vaccinator has it in his power to interfere with the patients of other medical men, for the advantage of his own practice.

It cannot be that the authorities do not trust the general practitioner as to his capability; for, though they do not define what is to be considered a satisfactory vaccination, they already accept his certificates for the vaccination of all those who are independent enough to wish to pay for themselves rather than be helped out of the Poor Rate. If the general practitioner were paid by the guardians he could be made to furnish data as to the number of insertions and result, and thus a uniform high standard would be secured; whereas now the general practitioner is left to form his own standard as to what is a satisfactory vaccination.

In conclusion, Sirs, I shall be glad to know if something should not be done to prevent the publication by an association of medical men of such an undignified, and, by implication, unjust, advertisement as the inclosed cutting.

In view of the fact that considerable misapprehension exists in regard to revaccination, the Organising Secretary of the Association of the Public Vaccinators for England and Wales writes to inform the public:—

1. That every person in England and Wales is entitled to demand revaccination at his own house, free of charge, at the hands of the public vaccinator of his district, provided that such person has not been vaccinated or revaccinated within 10 years preceding the date of his demand.

2. That the name and address of the public vaccinators for each district in England and Wales can be obtained from the clerk to the guardians and from the registrars of births and deaths.

3. That public vaccinators are the only medical men who are compelled to use the safeguards prescribed by the regulations of the Local Government Board, and that they are the only persons who can obtain the pure glycerinated calf lymph prepared in the laboratories of the Local Government Board, and that they are compelled to use that lymph in all cases of vaccination and revaccination in their own districts.

I am, Sirs, yours faithfully,

Harrow, Nov. 9th, 1901. A. H. WILLIAMS, M.D. Edin.

To the Editors of THE LANCET.

SIRS,—Under the heading "Vaccination Facilities" there appears a letter in last Saturday's *Morning Post* from the Organising Secretary of the Association of Public Vaccinators. I should much like to ask this gentleman in reference to par No. 3 of his communication (1) whether he considers all glycinerated calf lymph, other than that obtained from the Local Government Board, to be open to objection; (2) whether by using the words, "That public vaccinators are the only medical men who are compelled to use the safeguards prescribed by the regulations of the Local Government Board" he wishes the public to infer that public vaccinators are the only medical men capable of properly performing vaccination; and (3) whether his letter is intended to benefit and enlighten the public or whether it is not, in reality, in the nature of a trades-union circular calculated to boom the public vaccinator at the expense of the private practitioner.

I am, Sirs, yours faithfully,

ALFRED BALDOCK, M.B. Aberd.

Earl's Court-road, South Kensington, Nov. 11th, 1901.

EFFICIENT VACCINATION.

To the Editors of THE LANCET.

SIRS,—In connexion with the question of the efficacy of much of the glycerinated calf lymph that is being used for revaccinations at the present time it appears to me that there is another important element in the case to which your correspondents make no reference. When talking to people on the subject (and wherever one goes vaccination is a general topic of conversation just now) one has repeatedly heard the following statement: "I have been revaccinated and it did not take (or it took only slightly) and my doctor says I need not be done again because it shows I am not susceptible to small-pox." In view of the fact that much of the lymph being sold is inert or very feeble, as evidenced by patients developing typical vaccinia after a subsequent revaccination with another sample of lymph, practitioners ought not, I think, to tell their patients that they are insusceptible because they have been once revaccinated unsuccessfully with a lymph the potency of which is in many cases extremely doubtful. Should, unfortunately, our efforts to stamp out the disease this winter be unavailing and the epidemic of small-pox break out in earnest with the approach of the spring, as we may be led to expect, judging from the history of previous outbreaks, the value of vaccination and revaccination will be seriously called into question if many of the so-called "immune" persons—really inefficiently revaccinated and quite unprotected—should acquire the disease. Successful vaccination and revaccination are of such prime importance in connexion with the public health that the Local Government Board ought at once to take the matter in hand, and either supervise the manufacture of the lymph supplied by the various firms or make arrangements whereby practitioners other than public vaccinators may obtain a reliable lymph. At present it is only by going to the public vaccinators that the public are certain of being treated with a potent lymph, and only under those conditions is a negative result of any value at all; even then an unsuccessful revaccination should be repeated in the case of those persons who have not been vaccinated since infancy.

I am, Sirs, yours faithfully,

DAVID NABARRO, M.D. Lond., D.P.H.

University College, London, Nov. 11th, 1901.

To the Editors of THE LANCET.

SIRS,—I am desired by the Executive Committee of the Jenner Society to forward to you the inclosed copy of a resolution recently passed by them with the hope that in view of the great importance of the subject to which it refers you will be able to find room for it in your columns.

I am, Sirs, yours faithfully,

FRANCIS T. BOND, M.D. Lond.,

Gloucester, Nov. 8th, 1901. Honorary Secretary.

[INCLOSURE.]

At a meeting of the Executive Committee of the Jenner Society, held at Gloucester, Nov. 1st, 1901, it was resolved unanimously: That it is desirable in the interests of the public health as well as for the fuller appreciation of the truth concerning vaccination, that in every outbreak of small-pox the authority responsible for the isolation of infected persons should at as early a date as possible, and from time to time during the outbreak, issue for the information and assurance of the public returns of all cases of small-pox under their observation, in a form showing the vaccinal condition of all persons attacked who are alleged to have been vaccinated, in regard to (1) their ages; (2) the time when vaccination was done; (3) the evidence, so far as may be discoverable from scars or other sources, of the character of their vaccination; (4) the type of the attack; and (5) its result (so soon as this can be done).

To the Editors of THE LANCET.

SIRS,—The protective influence of vaccination is one of those questions which can only be settled by experiment; talking and writing, discussions on platforms and in newspapers, will never settle it. When Jenner told Hunter he thought he had discovered a protection from small-pox Hunter said, "Don't think—*try*." Tell an unscientific audience that if the surrounding air were removed a sovereign and a feather would fall to the ground in the same space of time or that water is composed of two volumes of hydrogen and one of oxygen and they will not believe you, but if you remove the air and decompose and recompose the water by two experiments and show your audience that your assertions are true they will see and believe. Also, if it were permissible, I could show them by

an experiment that vaccination protects from small-pox. I would take 20 children, 10 unvaccinated and 10 efficiently vaccinated, place them in some hospital ward, and inoculate all of them with matter taken from a small-pox patient; then they would see that all the unvaccinated and none of the vaccinated took the disease. The experiment would be conclusive and *cadit quaestio*. Mr. Marson tells us that in 30 years no nurse or servant at the Small-pox Hospital has taken small-pox, he having taken care always to revaccinate them on their admission; and further, that when a large number of workpeople were employed for several months about the hospital, most of whom consented to be revaccinated, two only were attacked by small-pox and these were amongst the few who were not revaccinated. Anti-vaccinationists alone fail to see in these facts a proof of the protective power of vaccination. Possibly, if half the nurses had been anti-vaccinationists and unvaccinated, if all of these had been attacked and many of them had died whilst all the vaccinated escaped, they might be convinced; but it is more probable they would ignore all the facts and fall back on their stock arguments based on statistics. Now, statistics are only valuable when compiled with the greatest possible care, and in the matter of vaccination this care has not been exercised. When we bear in mind that in the early days of vaccination, when postmen, grooms, and others were often the operators, vaccinations in thousands of cases were mere shams; that, more recently, lymph was taken from the arm upon little ivory points and kept for weeks and months before it was used, by which time the lymph was as dry, hard, and inert as a naked ivory point; that even now some vaccinations are so inefficient that they leave only one or two imperfect marks, instead of the three, four, or five characteristic ones required by our experts, it is evident that if statistics include persons thus really and truly *unvaccinated as vaccinated* all arguments based upon and conclusions drawn from such statistics are utterly worthless. What we contend is that *efficient* vaccination and revaccination confer immunity from small-pox, and we challenge anti-vaccinationists to prove that it does not.—I am, Sirs, yours faithfully,

D. HOOPER, B.A., M.B., M.R.C.P. Lond.

Trinity-square, S.E., Nov. 9th, 1901.

To the Editors of THE LANCET.

SIRS,—As supplementary to, and confirmatory of, Mrs. E. Garrett Anderson's letter in THE LANCET of Nov. 9th (p. 1299), may I be allowed to draw the attention of your readers to a correspondence which has been going on in the *Times* with regard to the gross injustice under which the public generally and the medical profession labour owing to the National Vaccine Establishment refusing absolutely to supply calf vaccine to medical men for private vaccinations, so that the lymph from which these vaccinations are performed has to be obtained from outside sources about which nothing is known as to preparation, source, stock, purity, or quality, and this notwithstanding that the establi-hment is kept up by Imperial funds and for national purposes. Why should this lymph, about which at least we do know something, be reserved and supplied gratis only to that already well-paid monopolist, the public vaccinator? If "efficient" vaccination is a prophylactic against the ravages of small-pox, surely the largest factor in that efficiency is the purity and energy of the vaccine; the person, the mode, and the area being but minor factors compared with this, the essential agent of the process on which the subsequent immunity depends. I venture to say that if a medical practitioner were questioned by his patient as to the source of his lymph in most cases his knowledge would only extend to the agent or druggist from whom he obtained it. Would this be considered really satisfactory by the patient if he knew or cared about inquiring what was being inserted into him? In years gone by we knew something of the strain of babies and their parents from whom we used to vaccinate from arm to arm; are we not sinking further into the mire of ignorance by the way in which we are driven by the supineness or inertia of the nation's vaccine authorities to use the lymph as at present supplied? Again, are we not playing into the hands of the anti-vaccinationists and forging a weapon wherewith they may thrash us? Those who saw the correspondence will notice that one correspondent made the excuse that the principles of the administration of vaccination remain the same as 30 or more years ago, though material change has taken place in the practice; if so, then the sooner the organisation of the administration is brought up to date the better, for at present there is an anomaly amounting to a scandal, or, as the *Times* puts it, a comedy which might easily be converted into a tragedy.

I am, Sirs, yours faithfully,

Nov. 9th, 1901. R. B.

SCARLET FEVER, SMALL-POX, AND VACCINATION.

To the Editors of THE LANCET.

SIRS,—The invasion of small-pox calls for a careful survey of the forces available to meet it. I do not presume to enter upon the discussion of these forces in detail. I wish, however, to invite attention to one or two questions relating to the infective characters of scarlatina and small-pox and the action of vaccination which appear to have been overlooked.

As to the propagation of scarlatina.—In the *Medical Gazette*, 1850-51, I published a paper "On the Occurrence of a Muco-purulent Discharge in Scarlatina, and on the Importance of this Symptom in Relation to Forensic Medicine." The argument of this paper was based upon a case of scarlatina in a girl, aged about 16 years, which I had seen at the Hôtel-Dieu when a student under Chomel. After the decline of the eruptive stage, and when apparently convalescent, there occurred a muco-purulent discharge from the vagina similar to that which not uncommonly flows from the nares as one of the sequelæ of scarlatina. I afterwards saw a child, 11 years old, who was recovering from scarlatina. It was observed for the first time that she had a discharge from the vagina, and suspicion arose that she had been abused by a lad in the neighbourhood. Dr. Tweedie told me that his attention had never been directed to such an occurrence, and that when a purulent discharge from the vagina was noticed in scarlatinal patients he concluded it to be blennorrhagia.

In 1851 I published in the *Medical Gazette* a paper "On the Occurrence of a Muco-purulent Discharge from the Vagina as a Consequence of Small-pox," and I pointed out that leucorrhœa so arising may be the foundation of persistent leucorrhœa and lead to confirmed inflammation and hypertrophy of the cervix uteri. The etiological error and the disease may be avoided, and the disease be readily subdued if detected early. It is interesting evidence of the action of the zymotic poison throughout the system. I insisted on the expediency of making strict investigation into the state of the vaginal canal, especially at the period of the decline of the febrile symptoms. In order to fix attention upon the origin of leucorrhœa from zymotic disease I proposed to distinguish them by the terms "scarlatinal leucorrhœa" and "variolous leucorrhœa." I am not able to determine to what extent these forms of leucorrhœa have been recognised. But there is reason to think that they have not received the attention they deserve from pathological, therapeutical, or medico-legal aspects. It is not mentioned in Quain's Dictionary. But Graves, Scanzoni, and others have since confirmed my observations. A striking example of this oversight may be seen in the report of the Fever Hospital Committee of the Royal College of Physicians in 1900. In discussing the infectivity of mucous discharges, "otorrhœa" and "rhinorrhœa" are mentioned, but no mention is made of the discharges from the vagina or other mucous canals. To this committee which undoubtedly represents the knowledge of the profession in general, the variolous and scarlatinal leucorrhœas are but hidden constituents of what I have called "occult leucorrhœa."

How long does the infective property of these vaginal discharges last?—I am not able to answer this question, but it may be assumed that it lasts quite as long as that of the skin and perhaps longer. And without reckoning direct contact with the poison at its seat in the vagina, the deposit of the poison on linen, clothes, and w.c.'s, and other modes of diffusion, must be admitted as probable modes of infection.

How to avoid or minimise this danger?—I have always advocated the use of warm baths, simple or charged with small additions of iodide or carbolic acid. In very persistent cases a small plug of sponge or lint impregnated with a weak solution of iodine may be introduced into the vagina. As the infective poison may be absorbed from the vagina so may the antitoxin.

I think it useful to add a caution as to vaccination. I have seen serious illness follow upon vaccination in adult women. In young healthy children the vaccine matter works its simple course, but in some subjects, especially those in whom some morbid process is at work,

a complicated reaction takes place, an unlooked-for fermentation results in a form of toxæmia involving danger to life. Cases of this kind are sure to be seized upon as the ground for "conscientious objection" by the faddists who do not recognise their duty to their neighbours. The conclusion is that the fitness of the individual to go through vaccination soundly must be well weighed. This is especially proper in the case of revaccination. I am afraid there is not only the fault of non-vaccination to contend with, but there is also the fault of indiscriminate vaccination.

I am, Sirs, yours faithfully,

Nov. 13th. ROBERT BARNES.

THE SANATORIUM IN THE TREATMENT OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Among the many weighty questions raised by Professor Allbutt in his eloquent address on the above subject (published in your last issue) not the least important is that relating to the use of gymnastics in phthisis. After observing that the subject is "little understood," and that in the more active stages of pulmonary disease "gymnastics must be inappropriate," Professor Allbutt continues: "In healing stages, when softening has ceased and the lung is drying and laying down protective fibre, may not gymnastics, under supervision as skilled as for cardiac disease, do much to expand and thus to call into healthy function the parts which the tubercle has spared? I seek the answer from those who are dealing daily with these problems."

This question is, I think, capable of a decisive answer. In no form of lung disease, not even excepting extensive collapse left by a vanished pleural effusion, are special exercises for the purpose of bringing about pulmonary expansion either needful or desirable. The fact is that in all cases of lung disease sufficiently pronounced to cause dyspnœa the organism of its own accord puts into operation, by virtue of the dyspnœa, a process by which the lungs are expanded just so much as is desirable. Now, in phthisis dyspnœa, even though it should be absent during complete rest, is readily provoked by even moderate exercise, and, therefore, no special exercises are required to promote pulmonary expansion in this disease.

The expanding force which operates in dyspnœa results from the powerful contraction of the inspiratory, as compared with the expiratory, muscles. In acute dyspnœa resulting from sudden occlusion of the trachea and similar causes there may, it is true, be very powerful expirations—indeed, in dyspnœa thus induced the entire muscular system may be involved in violent contractions—but in the ordinary pulmonary and cardiac dyspnœa, as we see it in the sick-room, we shall find that the inspiratory muscles act much more vigorously than the expiratory. Why this is so I shall not stop to discuss; it is sufficient for my purpose simply to state the fact. Inspirations are vigorous, proceeding, it may be, to their limit; expirations are comparatively shallow; so that, if the lungs permit, there is an increase in the mean size of these organs. If much lung has been destroyed the total lung capacity may, of course, be subnormal, but often it may be normal, and sometimes, especially in chronic cases, even supranormal.

This over-action of the inspiratory muscles in dyspnœa I can vouch for from having for some years past carefully examined a large number of cases, with a view to studying the behaviour of the respiratory muscles in this condition. Often the expiratory muscles seem scarcely to act at all, expiration occurring essentially by passive recoil; sometimes, indeed, they do unmistakeably contract, but these cases form a special group any further reference to which would lead me from my point. So eloquent a testimony of dyspnœa is this inspiratory over-action that it is quite easy for anyone to diagnose blindfold a minute degree of it—all that is needful is to place a finger over the scaleni: the intensity of their contractions is an accurate measure of the intensity of the dyspnœa.

I trust, Sirs, that the above considerations make it clear that special gymnastic exercises for the purpose of favouring pulmonary expansion are needless in case of lung disease, inasmuch as the organism secures unaided all the expansion that is desirable; and even this expansion may have as a necessary consequence the induction of a considerable degree of emphysema.

I am, Sirs, yours faithfully.

Wimpole-street, W., Nov. 10th, 1901. HARRY CAMPBELL.

THE REORGANISATION OF THE ARMY MEDICAL SERVICES.

To the Editors of THE LANCET.

SIRS,—In view of the light thrown upon the report of the War Office Committee by the letter of Sir Frederick Treves in THE LANCET of Nov. 2nd (p. 1226) and elsewhere to the effect that "it provides no more than a framework upon which it is hoped that a system of reconstruction may be based," I would, with your permission, before the scheme takes a definite official form, make a few remarks on two of the headings contained in the communication referred to, and I limit myself to details only, as my opinion is that the scheme is a valuable one, based on right principles, and contains elements capable of being worked out to a successful issue.

And, first, touching the Advisory Board. The necessity for such a body is apparent in view of the conclusions of the Royal Commission on the desirability of a committee of experts for making out the details of its recommendations and the omission of the War Office Committee to comply therewith except on the one detail of the provision of a peace medical *personnel*. That the duties placed upon it are of a high order and of great importance will not be doubted, but what one may doubt is the advisability of placing upon it so many civil medical men, equalling the army medical men, considering that some of the duties it has to undertake, such as drawing up a scheme for ambulance, transport, and field medical organisation for war, and consideration of the fitness for promotion and retention of officers in the service are hardly such as are likely to be met with the necessary personal knowledge on the part of the civil section for a satisfactory result. The range of duties is certainly not covered by the qualifying prefix "advisory," inasmuch as some of these duties are essentially constructive in nature and some are as much "executive" in character as those usually performed by the Director-General, such as arrangement of examinations, inspection of hospitals, control of nursing service, and consideration of the names of those judged worthy of advancement. And in respect to this last function, while we may agree with Sir F. Treves that Paragraph 18 states that the Director-General is responsible among other matters for promotion, yet, if words mean anything, this responsibility is not solely delegated to him, but by Paragraphs 14 and 19 is shared also by the board. Unless this be the intention of the scheme Paragraph 14 is both meaningless and misleading. Moreover, the combined conclusion is not finite, as submission to the Commander-in-Chief is yet an essential part of the process. And as bearing on this matter we have by the new Order in Council for Army Administration the Commander-in-Chief charged with the duty of promotion in the service generally, a subject which, departmentally limited, has no place in Section V. relating to the duties of the Director-General, and I venture to think that the experience of some of our Director-Generals would not support the view that the execution of this duty in respect to the Army Medical Services by Commanders-in-Chief can be regarded as merely nominal in character and likely to be performed in a perfunctory way. That the responsibility for promotion and the power should rest with the Director-General will doubtless obtain a general concurrence, yet were this the opinion of the committee it is difficult to account for the introduction of the qualifying fourteenth paragraph; but as the matter now stands the responsibility is surely a divided one, and as such constitutes a great blot in the scheme.

And, secondly, touching the proposed system of examinations. While we may agree with Sir F. Treves on the purpose of the examinations we yet may doubt the advisability or the necessity of such frequency as is intended. Possibly and probably an examination is the best test for the junior executive ranks, but the desirability of subjecting middle-aged professional men to a third scholastic trial for determining their fitness for administrative duties may be questioned, especially as a possibly better substitute—selection from shown practical administrative ability—has been and is again advocated. And if it be asked what is the proposed basis for selection I would say, the same as that guarding the administrative posts—personal knowledge and honest, competent full reports. What is valuable and sufficient in the one case is equally so in the other. Sir F. Treves comments adversely on the "unjust and objectionable system of 'confidential reports,'" yet if we refer to Paragraph 21 of the scheme bearing on the admission of

candidates we find that "special importance shall be attached to a confidential report to be requested by the board from the dean or other authority of the school in which the candidate has completed his course as a medical student," and reports from the principal medical officer and officer commanding the service unit guard continuance in the service after three completed years, and "satisfactory conduct" (presumably based on reports) guards subsequent promotions. The old reports were confidential only in name, any adverse comments being necessarily given in writing to the individual affected, carrying with them the right to challenge them if thought desirable, and certainly acted on; and during a long career in which it was my duty to submit to this system and to practise it the worst feature advanced against it was its utter uselessness for the purpose intended, probably explained by the course adopted. How far the reports required for the future carry with them this important corrective of the old system remains a subject of doubt, but if not so safeguarded it seems to me that they will be open to adverse comment in a degree absent in the former so-called confidential reports. The necessity for reports is recognised and without them it is not possible to understand how the promoting duties of the board and of the Director-General are to be performed for the higher ranks, and provided that they are made by competent men and full in detail and possibly safeguarded as formerly it is not apparent where the objections lie and why they should not be equally satisfactory and operative for promotion to the rank of lieutenant-colonel in lieu of the third examination as for the administrative ranks. As for the probability of "no great stress being placed on two of the subjects" of this examination, this may indicate an instability of purpose on the part of the committee, yet from the view of the examinee a more important question is the attitude of the examiner in respect to them, especially as the information necessary for the satisfactory answering of one of them—the army medical services of other Powers—must be very difficult to obtain, even if anywhere available.

I am, Sirs, yours faithfully,

FRANCIS H. WELCH, F.R.C.S. Eng.

Brandram-road, Lee, Nov. 9th, 1901.

THE FORTHCOMING ELECTION OF DIRECT REPRESENTATIVES.

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of Sept. 21st (p. 802) you refer to a scheme put forward by the Manchester Medical Guild for the settlement of the midwife question, and you say that it is in its essential features the same as I put before the profession in 1898 in my Sick and Obstetric Nurses Bill. I have to thank you for saying so as for some reason or other the Manchester Medical Guild appear to have resolved to rob me of any credit I am entitled to in the matter. I enclose you once more a copy of my Bill and you will see at a glance that the vital clauses of the Bill are adopted in the Guild scheme. If you can see your way to publish the Bill, or at least the principal clauses, the profession as a whole will be able to draw its own conclusions. In his address to the Manchester Medical Guild on Oct. 31st Dr. Woodcock is generous enough to say[1]:—

> Recently they had had the outline of another scheme which was called the Medical Guild scheme. There had been a little discussion as to the paternity of that measure in the press. He did not know himself that it was quite a newborn child. He thought it was a sort of foundling adopted by the Medical Guild and it did not appear that it was got rid of by its real parent with the idea of avoiding responsibility, but he was generously hiding himself that when the child was more developed he would be able to augment the resources of its foster-parent.

As this passage of Dr. Woodcock's address can only refer to me I beg to say that I have always maintained the paternity of the scheme and never tried to "get rid of it" in any sense of the word, and, once more, I must express my surprise at the left-handed conduct of the Manchester Medical Guild in the face of Dr. Woodcock's admission. All I ask is fair play and the insertion of the leading clauses of my Bill in the columns of THE LANCET. I much regret that I could not hear Dr. Woodcock in Liverpool and ask him the following questions which I put to Mr. Horsley, Mr. Brown, and Mr. Jackson: 1. Will you try to induce the General Medical Council to introduce a Bill embodying the 10 points submitted to the Privy Council as essential in any Bill dealing with midwife registration? 2. If the Council refuse, will you introduce a Bill yourselves, and on what lines? 3. Will you try to induce the General Medical Council to administer any Bill that may be passed into law?

I consider the above questions cover the whole ground of the midwife controversy, and I purposely abstained from alluding to my own Bill, so as to eliminate the personal as far as possible, and, as I said, to take the settlement out of the hands of amateurs. Mr. Horsley's reply to the first question was "to leave the General Medical Council severely alone," but all three promised to introduce a Bill next session embodying the views of the vast majority of the profession on the midwife question. So far matters are clear, and I think it is regrettable that Dr. Woodcock, evidently with a view to securing votes and conciliating the members of the Guild, should pin his faith to a scheme which he admits is none of theirs but is in the position of an "adopted foundling." That a Bill such as I have drafted and the principles of which have never been controverted must be introduced early next session goes without saying or the cause is lost and the Midwife Registration Bill will become the law of the land. As to my third question none of the candidates appear to have made up their minds. Mr. Horsley said the General Medical Council had not the means to administer the Midwives Bill or any other Bill, and had not the power to impose a tax on the profession for administrative purposes. This is very unfortunate as the creation and endowment by Act of Parliament of a Midwives Board with a majority hostile to the medical profession—as undoubtedly it would be—would be disastrous to the prestige of the Council and go far to annul the Medical Acts. I hold that at whatever cost the General Medical Council must oppose the creation of a rival education board for one of the three branches of professional training. Mr. Horsley said that Government had already refused a grant to the Council for this very purpose and, therefore, immediate steps should be taken to raise the money by loan or by a special emergency tax such as Government calls up in an acute national crisis. I have reason to believe that the profession would respond liberally if offered a *quid pro quo* by the Council in the shape of increased direct representation. That failing, special provision should be made for financial emergencies in the proposed new Medical Reform Bill.

I am much surprised at Mr. Horsley's attitude towards the sitting Direct Representatives. He has gone considerably out of his way to recommend Dr. Woodcock to the electors, and says that of all the candidates at present before the profession Dr Woodcock *alone* would be listened to with respect and be in the position of a *persona grata* to the President of the Council. Surely, this is going too far. I have not seen Dr. Woodcock and therefore cannot judge of his moral fibre, but such personal flattery is enough to turn any man's head and possibly might subvert his judgment in some acute crisis affecting the welfare of his constituents. Our present representatives have done yeoman service for their constituents and all must regret Dr. Glover's decision to resign; but it would be a calamity to the profession if either Mr. Brown or Mr. Jackson were left stranded in the council chamber and subjected to presidential jibes and flouts for trying to do his duty, while Dr. Woodcock enjoyed both smiles and compliments because of his greater complaisance. It is for this and other such reasons that I feel it my duty to myself and to the profession to vote for and support our "twin candidates" in the persons of Mr. Brown and Mr. Jackson. We want, above all, conscientious men who will do their duty "without fear or favour," and I am satisfied that these two plain-spoken men will support each other and be mindful of their pledges.

There is another excellent candidate from Liverpool in the person of Dr. Hayward, who is both medical man and lawyer, but he is, I fear, too late in the field for this election, but will be a powerful rival to some one on a future occasion.

We are in the presence of a great crisis in professional affairs and a false step just now would be fatal. It could not be retraced, try as we might, and it behoves us to hand down untarnished to posterity the fair fame of our noble calling. This is not to be done by creating a *quasi*-professional class of half-educated female practitioners under a central authority in keen competition with the Council of Medical Education and Registration, but by calling into existence by Act of Parliament or otherwise properly educated "obstetric nurses" who, like their

[1] THE LANCET, Nov. 9th, 1901, p. 1292.

professional sisters, will bring light and joy into the homes of the parturient poor. I am, Sirs, yours faithfully,

Liverpool, Nov. 9th, 1901. ALEX. MCCOOK WEIR.

A POINT FOR PUBLIC VACCINATORS.

To the Editors of THE LANCET.

SIRS,—It may be helpful to such of my colleagues as are public vaccinators if you will kindly publish the accompanying copy of a letter received by me to-day from the Local Government Board, which explains itself.

I am, Sirs, yours faithfully,

THOS. FRED. I. BLAKER,
Public Vaccinator, Steyning Union, Sussex.

Preston, Brighton, Nov. 9th, 1901.

[COPY.]

Local Government Board, Whitehall, S.W.,
Nov. 8th, 1901.

SIR,—I am directed by the Local Government Board to advert to your letter of the 1st instant, and in reply to state that the Vaccination Acts do not require the Public Vaccinator to send certificates of successful Revaccination to the vaccination officer.

I am, Sir, your obedient servant,
(Signed) NOEL T. KERSHAW,
Assistant Secretary.

THE FALLING OFF IN THE ENTRIES OF LONDON MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—No doubt the falling off in the number of entries at the London medical schools is partly due to the facts stated by your correspondent, but, I submit, a more powerful factor in producing this result is due to a determination on the part of future medical students to obtain a pass degree in the provinces with all its professional advantages rather than a diploma of the same standard of efficiency with all its professional, pecuniary, and social drawbacks.

I am, Sirs, yours faithfully,

FREDK. W. COLLINGWOOD.

Wimpole-street, W., Nov. 9th, 1901.

THE PERSONAL FACTOR IN TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—I am glad to see that Sir Dyce Duckworth has been calling attention to the personal factor in tuberculosis because there has been a tendency of late years to minimise the part played by the patient in the causation of disease. There is one indispensable cause of a microbic disease such as tuberculosis—namely, the action of the microbe on the tissues. This involves two equally essential factors—the presence of the microbe and the susceptibility of the tissues—and neither of these is effective without the other. Variations of a disease are often due more to variations of the personal factor than to variations of the microbe itself. This personal factor is of great importance with reference to treatment, since it is through it that we can best effect a cure or an improvement. For instance, the hygienic treatment of tuberculosis acts by increasing the power of the patient to resist the encroachments of the bacillus. I think that Sir Dyce Duckworth is a little hard on pathologists, but I must admit that the personal factor is often kept too much in the background.

I am, Sirs, yours faithfully,

CHARLES POWELL WHITE.

Medical School, Leeds, Nov. 11th, 1901.

THE DANGERS OF WHIPPING WITH THE CANE.

To the Editors of THE LANCET.

SIRS,—Many years ago now, when I was the staff officer and cantonment magistrate in a station in India, I was visiting officially one of the military schools. The schoolmistress, a tall, powerful woman, the wife of the schoolmaster, brought a boy before me, a sturdy, strong-looking little fellow, aged about 10 years, and charged him with repeated acts of theft. The child admitted his guilt and the school-mistress suggested a whipping. I gave the necessary permission but limited the strokes to six. The schoolmistress unfastened the boy's braces and put her left foot on the raised dais, and lifted the child on to her left knee, took down the white duck knickerbockers a little way, and raised the boy's shirt. One of her assistants handed her a thin cane. The first stroke left a terrible mark, and as I am altogether opposed to any undue severity I cautioned the school-mistress. At the third stroke the cane split and before I could stop the punishment the split cane came down upon the child's bare thighs inflicting a very nasty wound that bled freely. The child was immediately removed to the hospital that was quite near and got promptly the necessary treatment. Of course, the schoolmistress, who was really a very kind-hearted woman and only wanted to cure the young thief of his dishonest tendencies, was in a terrible state of distress. I consoled her by telling her that we had learnt a lesson—namely, that a thin cane was a dangerous and too severe an instrument of correction on any part of children's bodies or hands. I had all the canes called in and orders were issued that only the hand or a slipper, the smooth back of a hair-brush, or a birch-rod were to be used.—I am, Sirs, yours faithfully,

P. F. ROBERTSON, Lieutenant-Colonel,
(late) 92nd Gordon Highlanders.

Cliftonville, Bray, co. Wicklow, Nov. 4th, 1901.

SYNOVITIS FOLLOWING VACCINATION?

To the Editors of THE LANCET.

SIRS,—I recently vaccinated a gentleman with exceedingly good results so far as the vaccination itself was concerned. The arm furnished an excellent instance of a "good take." The right knee, however, soon began to swell and in the course of a few days the patient was *not* enjoying a well-developed synovitis of a curiously passive character. There was practically no pain or inflammation, and as the patient had in no way injured the knee and had never suffered from gout or rheumatism nor gave any history of rheumatic tendency I was obliged to admit that in all probability the synovitis was a result of the vaccination. I should like to know if any of your readers have had a similar case.

I am, Sirs, yours faithfully,

A. J. RICE OXLEY, M.D. Dub.

Courtfield-road, S.W., Nov. 9th, 1901.

X RAYS IN HIRSUTIES.

To the Editors of THE LANCET.

SIRS,—Since my communication to THE LANCET of March 3rd, 1900, p. 654, I have had the opportunity of exposing about 40 cases of hirsuties to the x rays. Those mentioned in that letter are now free from growth. Those exposed within the following six months are as nearly relieved as can be. I notice that your correspondent Dr. David Walsh, in THE LANCET of Nov. 2nd, p. 1191, corroborates this treatment in hirsuties and suggests a dual treatment by electrolysis and x rays. My experience goes so far, now, to show that the Roentgen rays, if carefully carried out in exposures of 10 minutes on consecutive days for about a fortnight at intervals of from two to three months will generally effect a complete removal of hair and, I believe, this is the experience of Professor Schiff of Vienna and other workers. I recently have had under observation two cases, one lupus, one rodent ulcer, in which the adjacent hair has been destroyed by the unprotected action of repeated raying. I may here report a very favourable result in a case of ulcerating epithelioma of the tongue after nine exposures to the x rays; the photographs of the case I shall hope to forward shortly to you.

I am, Sirs, yours faithfully,

Harley-street, W., Nov. 5th, 1901. JAMES STARTIN.

MEDICAL MEN AND MIDWIVES.

To the Editors of THE LANCET.

SIRS,—Like many others of your correspondents, I have had the usual number of casual confinements, staying upon such occasions for hours in dwellings bearing the usual signs of chronic alcoholism in their tenants, and being myself nearly eaten alive, without receiving a penny for my time. So I have also resolved to take no confinements unless previously engaged or unless my fee is tendered in advance.

It is all very fine for the so-called leaders of the profession

who count their gains by guineas instead of shillings to indulge in cheap sneers at the "tradesmanlike" attitude of the general practitioner, but as a descendant myself of a commercial family I fail to see the stigma of being dubbed a tradesman. In fact, grocers, haberdashers, and others are too often robbed by the same customers who go the round of all the doctors in the place and pay no one. With regard to emergency calls in general, I have been summoned in haste to a sudden illness in a factory near by, the employé who took the message having evidently had instructions to run for the nearest medical man. In due time I presented my account to the employer for one emergency visit, which paper was returned promptly with the curt reply written across the back, "We have nothing to do with this."

Now, Sirs, can you wonder that in such circumstances, and with such treatment, some people have a difficulty in procuring medical aid in their hour of need. If the legislature is going to compel us to run to any and everybody who chooses to send for any one of us, then the legislature will have to pay adequate salaries all round to thousands of those who, like myself, can subscribe themselves,

Yours faithfully,

Nov. 11th, 1901. G. P.

THE CIVIL SURGEON AT THE WAR.

To the Editors of THE LANCET.

SIRS,—The position of the civil surgeon now serving in the South African war is perhaps the most curiously anomalous one on record. In a national emergency he offered his services; his country eagerly accepted them; he was more than necessary—they could not do without him. The authorities had succeeded in making the Royal Army Medical Corps so unpopular that, always terribly undermanned in times of peace, it was hopelessly inadequate in times of war. Surgeons must be had, and that quickly. Surgeons heard the call and responded nobly. They left their practices, their wives, and their children, not for love of martial glory or yet for greed of gain, but out of sheer pity for poor suffering humanity. They had not only the bullet to fear, they had to fight the deadliest disease as well. It has never yet been realised that they, of all others, have made the most sacrifice for their country and will receive the least reward.

The civil surgeon has no position; he holds no status in the army; he is not even granted the temporary rank that rejoices the chaplain's heart. Non-commissioned officers and men of the Royal Army Medical Corps pass him by without salutation—they are frequently guilty of incivility. The civil surgeon has come without a wedding garment, so to speak, and his very existence is hardly officially recognised. Some assert that he is well paid for his work. Let us see. When he signs his contract with the War Office he is given a list of things that a kindly, fatherly Government "advises" him to get—a khaki uniform is one of the items. If he wants to walk about Africa in a frock-coat and top hat the kindly Government will not stop him; it does not *command* a uniform any more than it *commands* a waterproof sheet and a flannel shirt, but it gently "recommends" what are absolutely unavoidable necessities. Thus does it slide out of its responsibilities instead of making a proper grant for the purpose.

At the end of the war the civil surgeon is presented with a "gratuity" of £60 and is sent home to his family very much the worse for wear and tear, with a shattered constitution and very ragged clothes. The £60 is not lost upon him, but, unfortunately, it has "gone before" in providing the above-mentioned equipment. A chaplain receives £100—one wonders why, for his services cannot be compared to the hard round that falls to a surgeon's lot. Day and night he is ever at work. For this he receives £1 per day, 3*s.* 6*d.* field allowance, and 1*s.* 6*d.* for servant, but he has *no Colonial allowance*. In view of the extraordinary expenses of South African life, where things are 100 per cent. dearer than at home, all other officers are given this Colonial allowance, but the civil surgeon has to buy his eggs for breakfast out of his own pocket should he want them (they are 9*s.* 6*d.* a dozen) or go without. An experienced miner can earn from £50 to £70 per month and cannot live in great extravagance on that. No professional man should go out to Africa in any capacity at all unless he is absolutely assured of an income of at least £500 a year.

I am, Sirs, yours faithfully,

Nov. 11th, 1901. A CIVIL SURGEON.

THE POOR AND THE PLAGUE IN GLASGOW.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

THE fact that some cases of plague have again occurred in Glasgow renders all questions of sanitation in connexion with that great city and port of more than usual interest. Dr. A. K. Chalmers, the medical officer of health, in his able and exhaustive report on the cases of plague which occurred in Glasgow during the autumn of 1900, says: "In the whole range of plague literature no feature in the spread of the disease is more uniformly insisted upon than its association with local conditions of grossly defective hygiene." Further, we are reminded that of the dustmen engaged in disinfecting dwellings in Bombay it was only those who lived in bad sanitary conditions who contracted the disease. Then Mr. James Cantlie has related that the eight Chinese students who acted as attendants in a plague ward at the Hong-Kong Hospital were free from the plague, though their relations living at home in less sanitary surroundings did suffer. But to return to Glasgow, Dr. Chalmers explains that the majority of the houses where plague occurred were hotbeds of vermin and that in one of these tenements, registered as large enough to hold only four persons, there were eight tenants. The disease, fortunately, was stamped out, but after a lapse of some 12 months it has reappeared, and though this time again it does not seem as if it were going to spread, still it is impossible to avoid feeling some anxiety. It is true that Glasgow has acquired a high reputation for its spirit of enterprise in matters relating to sanitation, but in regard to immunity from epidemic disease it is not so much a question of how much has been done as of how much there is yet to do. Many improvements may be achieved and yet so many defects may still remain that a sense of security cannot be justified. This is actually the case at Glasgow. At the meetings of the British Association, and of the International Congress of Engineers, and at the Conference of Municipal Representatives on the Housing of the Poor recently held in Glasgow and described at some length in THE LANCET,[1] much was said which clearly indicated that the corporation of Glasgow itself was in no wise satisfied with the existing condition of the dwellings of the poor; indeed, a mere casual stroll through some of the streets, especially on the south side of the Clyde, where most of the cases of plague occurred, is sufficient to make it evident that there still remains in this great and prosperous city an appalling amount of poverty, squalor, and dirt. Then if, further, some of the houses are visited, especially at night, it will be seen that, in spite of laws and regulations, sanitary inspectors, and private philanthropy, overcrowding still prevails and this on such an extensive scale as to create a serious public danger. On the other hand, if the record of work done is studied it seems very creditable, but unfortunately it does not suffice.

The Lord Provost, Dr. Samuel Chisholm, was able to explain to the British Association that 25 years ago there was in central Glasgow a great accumulation of narrow streets, dismal lanes, and filthy closes "where disease and death held high carnival, and vice and crime lifted their heads unabashed." But special Acts of Parliament have been obtained and the larger portion of this district has been reconstructed and the remainder is being dealt with. As a result, the death-rate, which in 1876 was 27·4 per 1000, is now 21·1 per 1000 for the whole town. But the death-rate of the central district was 40 per 1000, and it is still 30 per 1000. In the same interval the area of the public parks has been extended from 370 to 1055 acres and the Health Department has provided 19 open playgrounds for children. At the same time the population has increased from 510,000 in 1876 to 761,152 in 1901, so that there is much greater need of open spaces. To deal with this large population no less than 225 persons are now employed on the sanitary staff of the corporation, and yet overcrowding cannot be altogether prevented. Nevertheless, improvements are effected. For instance, the number of nuisances recorded in 1876 amounted to 13,406 and in 1900 there were no less than 44,148 complaints.

[1] THE LANCET, Oct. 5th, p. 943, and 19th, 1901, p. 1081.

These figures testify to the greater activity of the sanitary inspectors; education in regard to sanitation also has evidently progressed, for there is no longer so much inclination to resist proposed sanitary improvements. Thus, though in 1876 a much smaller number of nuisances were reported, it was necessary to take legal proceedings in 119 cases, while in 1890, though there were more than three times as many nuisances reported, it was only necessary to prosecute in 20 cases. In regard to common lodging-houses there has also been a marked improvement. In 1887 there were 101 common lodging-houses in Glasgow, with beds for 6273 lodgers. Many of the worst, the smallest, the dirtiest, and the most unsuitable have been swept away, and the corporation has set a good example by building seven large model lodging-houses and by thus competing with private enterprise has helped to raise the standard of accommodation. Now there are only and in all 69 common lodging-houses, but they are larger and better equipped and accommodate 9497 lodgers.

A system of what is called ticketing small dwellings has been introduced which should be productive of much good. This means that such dwellings are measured and a ticket or inscription is placed outside the door stating the cubic capacity and how many persons may be allowed to sleep in the dwelling. Six inspectors are employed all the year round to visit these places during the night. They work in pairs, so as to have corroborative evidence, and the owners are summoned when overcrowding is detected. It is claimed that this has contributed to reduce the prevalence of typhus fever, but there were 72 cases of typhus fever in the year 1900. Six female inspectors visit low-class dwellings during the daytime and seek to persuade the female householders to keep their homes clean and in good sanitary condition. Other inspectors are daily engaged in testing drains. It is a wonder how with so much supervision so many sanitary defects should still exist. The fact is, that no amount of inspection can alter economic conditions or convert thriftless drunkards into sober and domesticated men and women. Thus I had no great difficulty in finding houses that presented all the appearances of fever-dens. The greatest evils arise in what is termed the farmed-out houses—namely, rooms more or less furnished and let out at exorbitant rents to the thriftless and disreputable poor. These are often very old houses and altogether unsuited for the purpose. The first house I visited, situated in the centre of the city, was approached through a narrow backyard some four feet wide. On the left-hand side there was the back of a house abutting on to a broad street, and on the ground floor of this house there was a small shop where cheap pastry was sold. At the far end of the backyard there was a round tower containing a winding stair leading up to the furnished lodgings. As far as I was able to ascertain there were neither water-closets nor a water-supply inside this house. In the yard at the foot of the tower there was a water-tap and by the gully under the tap there was some fæcal matter. Within two or three feet of this filth a door was left open to give light and air to a small bakery where the cakes were made for the shop which had its back door abutting on to this narrow yard. A number of cakes were exposed on trays to the effluvia and dust from this yard and, of course, the dust readily adhered to the jam and sticky moist sugar coating of these so-called delicacies. This matter of the dust is all the more serious as there was also in this yard an open dustbin in which the inhabitants of the "farmed house" empty pails containing the fæcal matter which they bring down from their rooms. It is true that next to the dustbin there is a closet, but its door was locked and I was assured by some of the inhabitants of the house that they never went to the closet but used pails which they emptied in the dustbin. The presence of soil close to the water-tap showed that some of them did not even resort to this expedient. The existence of a bakery in the midst of such surroundings seemed to me anything but safe; but the insecurity arose out of the habits of the people rather than from any structural defect.

On attempting to penetrate the tower and climb the stairs I found the way blocked by two wretched women, one of them holding an infant in her arms. They explained that they were there for shelter. They had no home and no furniture, and the house-farmers would not let a room to the woman with the child for less than 1*s.* a day and she had no money and no work. On the other hand, I was strongly advised not to give her any money, as she would only spend it in drink; and thus I was face to face with the housing problem in its most sinister aspect. It seemed preposterous that there should be nothing between the workhouse and the exorbitant charges of the house-farmer. Doubtless the room which was offered to this woman for 1*s.* per night might have been obtained for 5*s.* a week, but she had neither the 1*s.* nor the 5*s.* I ultimately gained access to one of the rooms let for 5*s.* a week. It contained an extremely filthy bed, two wooden chairs, and a sort of dresser or chiffonnier fixed to the wall. The laths and plaster were dropping from some portion of the walls and ceiling and there was only one very small window in the roof which formed part of the ceiling of the room. In the little backyard of the house next door I found that the closet was not locked. It was a pail-closet and it was in a very filthy condition. A little further on I entered another farmed house where I came upon a little girl with pail and brush busily scrubbing the stairs. The stalwart landlady lived on the premises and was on the watch. She swooped down upon me and in a bellicose tone of voice volunteered the information that she did not tolerate a speck of dirt in her house. But I had already succeeded, before my presence was discovered, in penetrating one of her tenant's rooms and it was not a speck but a great deal of dirt that I found there. The appearance of this room was most deplorable. On all sides there were in this old building big rafters, strange and dark corners where dust and rubbish accumulate, and microbes could flourish safe from the danger of direct rays of light or sunshine. But the landlady now hastily bundled me into her own room which was clean enough and quite free from any appearance of poverty or neglect. On the contrary, there was a perplexing accumulation of superfluous furniture that gave the room the appearance of a store rather than of a dwelling-place. All these evidences of prosperity were in painful contrast with the misery prevailing in her tenants' rooms. The landlady, however, did not view the situation in that light and seemed to think that she deserved much praise for managing matters so well. In the house opposite there was certainly no one cleaning the stairs, and there was evidence of much greater neglect. Here also the stairs were within a tower and in the angle formed by one side of the tower and the wall of the house there was a little window which was used for throwing out all manner of refuse into the backyard. A good deal of this had stuck to the side of the wall and was hanging down and formed festoons of garbage. The sinks and water-pipes were situated in the same angle. The few panes of these staircase-windows that had not yet been broken were thickly coated and obscured by the dust and dirt of ages. In the yard below there was fæcal matter on all sides and the closet and dustbin were inexpressibly filthy. On the other hand, I was glad to note that several houses in this neighbourhood had been condemned and were already deserted by their former inhabitants.

What, however, will become of the dwellers who are driven out of such places? It was clearly shown at the Conference on the Housing Question that no provision had been made for them. I visited some of the dwellings built by the corporation and it is quite clear that these do not meet the most pressing need. For instance, at the Collins-street dwellings the rent for two unfurnished rooms is £1 1*s.* 2*d.* per month. It is true that there is not much furniture required, for the alcoves are provided with a wire mattress fixture which makes a good bedstead. Therefore, a mattress, some bedding, a table, chairs, and cooking utensils would suffice to furnish these tenements. A dresser, a coalbox, a sink, and a cooking-stove are also provided, and there is a washhouse with copper-boiler shared between eight tenants. This is all very well, but the tenants, though poor, belong to a much more respectable class than those who inhabit the farmed houses in the bad slums. The same objection applied to the corporation tenement houses in St. James's-road. Here the average annual rental for two rooms is £8 2*s.* per annum, and here some of the old abuses are commencing to creep in. For instance, I found a widow and her daughter shared one room and sub-let their other room to an adult male lodger. In another case, where there was space for two children, I found two adults. They had come in as children, but were now adults, and the caretaker did not like to break up the family by giving them notice to quit. It is difficult to be harsh on these poor people, but nevertheless these are infringements of the sanitary regulations laid down. If this occurs among a really worthy and respectable class of tenants, what must be

the state of affairs with the disreputable and the submerged residuum of the population?

Mr. William C. Menzies, manager of the City Improvements Department, in a report dated Nov. 15th, 1900, says that at that time his department had provided 373 one-roomed tenements, 853 two-roomed tenements, 138 with three rooms, and 11 with more than three rooms. In all there were 1375 tenements, and of these 467 were, he claims, suited for the poorest classes, as there were single-roomed tenements at £5 and two-roomed tenements at £8 2*s.* per annum. But there are a number of married men who do not earn £1 a week, whose wives cannot earn anything because they have to attend to their young children, and who cannot out of less than 20*s.* feed and clothe themselves, buy a little furniture, and pay 2*s.* a week, or £5 a year, rent. Even if they succeed in doing this then they have only one room to live, cook, and sleep in, and this is not enough if there are several children. Since the publication of Mr. Menzies' report the number of tenements has been increased to 1455. Then there are old houses that have not been pulled down but have been purchased and repaired by the corporation, and these are subdivided into 116 one-room, 123 two-room, and 93 three-room tenements. Altogether, and counting the seven municipal common lodging-houses, the Family Home, and the tenement dwellings, the corporation now lodge in all 11,875 persons. The minimum charge for a bed in a common lodging-house is 3½*d.* per night. The minimum rents are £4 10*s.*, £6 16*s.*, and £12 9*s.* per annum for one-, two-, and three-roomed tenements, and the maximum charge is £8 15*s.*, £14, and £21 respectively. The position, therefore, stands thus. The population of Glasgow according to this year's census is 753,766. The "submerged tenth," therefore, amount to 75,000. A few of this class may be counted among the 2430 occupants of the seven municipal common lodging-houses. Probably not one among them can be included in the 7000 or 8000 tenants inhabiting the corporation tenement dwellings. It is these 75,000 who constitute the gravest danger to the community. It is among them that the plague will spread most rapidly should it obtain a firm foothold in Glasgow, and it is from them that it will extend to the other and more fortunate classes. Then, after all, is the term "submerged tenth" correct? To judge from the deplorable, sordid, bedraggled aspect of the population seen in the streets of Glasgow, it might be questioned whether the proportion of the submerged does not exceed a tenth of the inhabitants. Whether submerged as the consequence of drink, idleness, vice, or as the result of unmerited and unavoidable poverty, the physical facts remain the same. Whatever may be the moral aspect of the question, and though some may have but themselves to blame, these human wrecks are a perpetual menace and danger to the whole community. With the plague reappearing in Glasgow this problem must be faced, nor has there been any attempt to burke this necessity. As already mentioned, and as described in previous issues of THE LANCET, the subject has been very fully discussed at Glasgow. What action, then, will now be taken?

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—An Important Addition to the Lady Dufferin Victoria Hospital in Calcutta.

FLUCTUATING weekly returns characterise the present recrudescence of the plague epidemic throughout India. Last week there were 8372 deaths, while the week before there were 8551. The Bombay Presidency returned 7372 deaths; Bombay city, 180; the Punjab, 248; and the Mysore State, 392. For the corresponding week last year the total deaths for the whole country were only 2505. During the past week there has been an increase in the Mysore State and in the Punjab. Elsewhere the disease is slumbering.

A Christian annexe has lately been put to the Lady Dufferin Victoria Hospital in Calcutta. The hospital is to consist of wards for female native Christians and children. Two wards are to be set aside for emergent and maternity cases where females of every class, creed, and nationality seeking admission will be received. The building is detached from the main hospital, but is worked by the lady superintendent and her staff.

Oct. 26th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

A Defunct Sanatorium.

THE tendency of education among all classes in the present day is the exercise of intelligence to suit their own needs and requirements. This has found a singular exemplification in the failure of the sanatorium at Sutton Coldfield. The land and buildings of this admirably-adapted institution were given in 1896 for the purpose of accommodating a special class of patients. It was estimated that patients would contribute 10*s.* 6*d.* a week during the time that they were present, and that from other sources also a profit would be obtained which would well meet the establishment expenses, any deficiency being made up by the funds allocated from the Hospital Saturday and Hospital Sunday organisations. In the year 1900 it was found that the total deficiency, including the contributions from these two sources, amounted to £277 1*s.* 11*d.* The committee, seeing that it was impossible to maintain the institution on the original lines, agreed to sell the land and buildings to the town council of Sutton Coldfield for the sum of £9000, and a Local Government Board inquiry has sanctioned the purchase. The reluctance of patients to avail themselves of the advantages of this place has arisen largely from the fact that they prefer to go to seaside places, and the establishment of such by the Hospital Saturday Fund at Llandudno has drawn them in that direction where the convalescent institutions are under the control of this fund. It is proposed to add 20 more beds to the sanatorium at Blackwell with part of the proceeds of this sale to the amount of £6000 which will in addition provide a winter garden for male patients and allow of the reconstruction of the drains. Therefore, though success has not been associated with the benevolent intentions of the donor on the lines originally laid down it will come in another form upon a wider and more appreciated basis.

Hospital Saturday and Sunday Funds.

The board of delegates in connexion with the Birmingham Hospital Saturday Fund met on Oct. 30th, when cheques were given to the various medical charities for the amounts apportioned. The committee take pride in the equipment and organisation of this fund, which, with the exception of some 4 per cent. for management, collection, and distribution, is all given to the medical charities of the city. The amount of this year's collection was stated to be £17,285, further amounts having yet to come in. The street collections have been abandoned this year. The various cheques were then handed to the representatives of the different institutions. The Hospital Sunday collections this year go to the General Hospital. The amount so far received has been £4192, but the total has not yet been reached. Some interest has attached to this year's subscription by the fact of an effort being made to mix up the question of the late Consultative Institution with the medical officers of the General Hospital. An attempt to show that the advertisements of titles applied equally to each institution and that the defunct organisation had been much maligned in a recent controversy resulted in some addition being made to the amount given.

Nov. 12th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Southern Hospital Dinner.

THE eleventh annual dinner of the Royal Southern Hospital took place on Nov. 2nd, at the Adelphi Hotel, under the presidency of Mr. Alfred L. Jones (now Sir Alfred L. Jones, K.C.M.G.). The guests included the Lord Mayor of Liverpool, the Bishop of Liverpool, Sir William M. Banks, Mr. Boyle, Consul for the United States of America, Mr. A. F. Warr, M.P., and others. The Chairman, in proposing "The Royal Southern Hospital," said that if there was one thing in Liverpool in which the public took a special interest it was in their noble hospitals. Too much praise could not be bestowed upon the very liberal men who had put the hospitals in their present position. The toast was responded to by Mr. William Adamson (the president of the hospital) and Dr. William Carter, the senior physician. Dr. Carter referred to the widespread prevailing ignorance

of hospital work. As an illustration he said that shortly before Hospital Sunday he received letters from two clergymen, both men of great enlightenment, inclosing circulars which had been sent to them asking them to discriminate in the allocation of their hospital collection in order that no support might be given to institutions where vivisection was practised or where working men were made the subjects of experiments. The circular suggested that almost all the hospitals were infected with these practices. He was, however, able to give the lie direct to these base suggestions. Dr. William Alexander, in proposing the toast of "University College," referred at some length to the splendid work accomplished at its laboratories both in teaching and in original research. He hoped the time was not far distant when University College would be transformed into the Liverpool University. He advocated a closer connexion between University College and all the large hospitals of the city. It was an anomaly that whilst in Liverpool there were three large hospitals, all possessing equal facilities for giving clinical instruction to medical students and all equally well equipped for that purpose, in only one had the full staff university status. He considered that, in the eyes of University College, all these hospitals should have equal privileges and that all should be represented in the medical faculty of the College. Then, and not till then, would University College, which had progressed very rapidly since its foundation, continue to advance in a still greater degree. The toast was replied to by Professor Rubert W. Boyce who said that the standard at the Liverpool Medical School was scholarship, and the school could hold its own in that respect. He agreed with Dr. Alexander that the David Lewis Northern Hospital, the Royal Southern Hospital, and the Royal Infirmary were all capable of supporting a medical faculty, and if they had a united medical faculty representative of all three he was sure it would be a great step towards founding a university for Liverpool. The toast of "The Tropical School" was proposed by the Bishop of Liverpool in a felicitous speech and was replied to by Major Ronald Ross, late I.M.S. Dr. Balfour Stewart (who is shortly to leave Liverpool in charge of a new expedition to the west coast of Africa), and Dr. C. J. Macalister. The toast of "The Sister Hospitals," proposed by the Lord Mayor, was responded to by Sir William Banks and Mr. R. W. Murray. The dinner was by far the most successful held since the inception of these popular gatherings and was attended by about 180 gentlemen, inclusive of guests.

The Liverpool School of Tropical Medicine: Opening of a Students' Hall of Residence.

On Nov. 2nd a students' hall of residence in connexion with the School of Tropical Medicine was opened by the Bishop of Liverpool. The object of the promoters of the institution (which is situated in Upper Parliament-street) is to provide a temporary home for colonial students, chiefly West African and West Indian, who come to study at the school. The Bishop alluded to the generosity of Sir A. L. Jones, Mr. John Holt, and the Hon. R. B. Blaize who had enabled the hall to be opened free from debt. Already five students are in residence at the new hostel, including two West Africans, one Belgian, one Canadian, and one American. Dr. H. E. Annett is the warden of the hostel. Principal Dale of University College, in moving a vote of thanks to the Bishop and to the three gentlemen above mentioned and also to the warden, spoke strongly of the value of such a home to students brought from abroad into the midst of a great city with its many temptations. Sir A. L. Jones, in acknowledging the vote, spoke of the continued progress of the Tropical School of Medicine which was now spending £5000 a year. They were meeting that evening, he added, to bid farewell to another expedition which was going to leave in a week or two.

The Proposed Extension of the Birkenhead Borough Hospital.

The increase of the population of Birkenhead from 59,000 in 1866 (the year in which the Borough Hospital was opened) to 117,000, the present estimated population, will show the necessity for an enlargement of the hospital to enable it to carry on its work in a thoroughly efficient manner. It is manifestly impossible to provide for the treatment of 10,520 cases annually in a building designed for a much smaller number. In addition to this the accommodation for the nurses is much too limited. The committee are appealing for funds to place the institution in a position more in accordance with present requirements. They have purchased the old fever hospital at the rear of the building, and here they propose to erect a nurses' home at an estimated cost of £7000, which will include furnishing, improvements in the kitchens, which at present are ventilated into the hospital, a mortuary, &c. Last year the ordinary subscriptions to this charity were £937, and the workmen's contributions reached the substantial sum of £1007. At present the committee are confining themselves to extensions which they consider of vital importance to the welfare of the charity; but they hope, with the generous aid of the inhabitants of Birkenhead, in time to add to the existing buildings and to make the hospital worthy of its past traditions.

The ex-Lord Mayor's Hospital Century Fund.

Mr. Arthur Crosthwaite (the ex-Lord Mayor of Liverpool) has remitted to the treasurers of various city charities £337 10*s.* 9*d.*, the balance of the Hospital Century Fund inaugurated by him at the beginning of his mayoralty, making a total of £10,463 10*s.* 8*d.* distributed among 23 charities.

The Arrest of Plague in Liverpool.

There have been no fresh developments of plague in Liverpool since Oct. 27th. Every precaution is being taken by Dr. E. W. Hope, the medical officer of health, against the spread of the disease. All boats from Glasgow are carefully examined on arrival at the port. Should no further case arise within the ensuing week it may fairly be assumed that Liverpool will have a clean bill of health as far as plague is concerned. It is satisfactory to note that no panic whatever has taken place owing to the few cases reported in the daily papers.

The late John Stopford Taylor, M.D. Aberd.

Dr. John Stopford Taylor, formerly medical officer of health of Liverpool, died on Nov. 11th, in his eightieth year. The late Dr. Taylor was appointed deputy medical officer of health in 1875, succeeding the late Dr. William Trench as medical officer of health two years later. Prior to his appointment as deputy medical officer of health Dr. Taylor was an alderman of the City Council and chairman of the Health Committee. He was considered one of the best debaters of his time in the City Council and made an excellent chairman of the Health Committee. He resigned the medical officership of health about seven years ago, receiving a superannuation allowance upon his retirement. Dr. Taylor was a native of Sheffield, where his father had been in medical practice for a considerable number of years.

Demand for Civil Surgeons and Dental Surgeons at the Seat of War.

The demand for civil surgeons in South Africa still continues. Applications have been received by the Dean of the Medical Faculty of University College and Warden of the Liverpool Dental Hospital respectively for civil surgeons and dental surgeons for service in South Africa on terms which are said to be particularly advantageous.

Nov. 12th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Precautions against Plague at Bristol.

UPON the recommendation of the medical officer of health (Dr. D. S. Davies) the Health Committee of the city of Bristol has decided to reappoint the plague sub-committee for the purpose of dealing with vessels trading between Glasgow or Liverpool and Bristol, and with the necessity for making the destruction of rats in the city warehouses a matter of municipal interest. Dr. Davies stated to the Health Committee that he feared that the carriage of plague over sea would never be stopped until the disease was recognised as a disease of animals and dealt with as such, and until the owners of merchant vessels were compelled to rid themselves of the rats which are now permitted to be carried in droves from one port to another.

Cottage Homes for Adult Paupers.

The success which has attended the establishment by boards of guardians of cottage homes for children has led to the suggestion that similar homes should be provided for adult paupers. The proposal was recently discussed at a

meeting of members of friendly societies at Cardiff at which several members of the Cardiff Board of Guardians were present. The principal objection to the scheme appears to be the fact that many of the children who occupy cottage homes are able to render assistance in the work of the households, whereas adult inmates would be of little or no service in this direction, so that the cost of management would be considerably higher than that in a workhouse and would, indeed, be prohibitive.

An Isolation Hospital for Kingswood.

The Urban District of Kingswood in Gloucestershire adjoins the city of Bristol and has a population of 12,000 persons, many of whom are working people. At the meeting of the district council on Nov. 6th the medical officer of health (Mr. C. J. Perrott) reported upon the existence of infectious disease, principally scarlet fever, diphtheria, and typhoid fever, in the district, the death-rate from these three diseases during October having been equal to 4 per 1000 per annum. This unusually high death-rate is very likely to continue unless the district council decide to carry out the recommendation of the medical officer of health to erect an isolation hospital. Mr. Perrott has estimated the cost of a hospital with accommodation for 16 patients at about £800. This must, of course, mean for a more or less temporary erection of iron or wood. It seems a pity that more permanent brick or stone buildings should not be provided, for there is really very little economy in building a temporary hospital which requires to be kept in a proper state of repair at the expenditure often of considerable sums annually; moreover, the Local Government Board will not sanction a loan for the erection of temporary buildings enabling the payment of the initial cost to be spread over a series of years.

Public Health Matters in Cardiganshire.

Under the chairmanship of Mr. Evan Evans, M.R.C.S. Eng., L.R.C.P. Lond., the Public Health Committee of the Cardiganshire County Council is taking an active interest in the sanitary condition of the county. At a meeting of the council held on Nov. 7th it was decided to recommend the district councils to pay for diphtheria antitoxin used by medical practitioners in treating those patients who cannot themselves afford to pay for the serum, and also that the cost of procuring bacteriological examinations for diagnostic and other purposes should be defrayed by the district councils. In connexion with the latter recommendation a more desirable course would appear to be for the county council to provide for all examinations either by arrangement with an existing institution or by the establishment of a county public health laboratory. Although the population of Cardiganshire is not large—only a little over 60,000—there ought not to be much difficulty in providing a laboratory jointly with the Aberystwith College of the University of Wales.

Royal Albert Hospital, Devonport.

A special meeting of the governors of this hospital was held on Nov. 4th to consider the proposal of the Devonport Corporation to subscribe £100 per annum to the institution conditional upon the corporation having three representatives as members on the management committee. The condition imposed gave rise to a considerable amount of discussion, as it would modify the existing arrangements of the institution, and the question of subsidising the hospital, even to this small amount, out of the rates involved a matter of principle with several of the subscribers. After a prolonged meeting it was decided not to accept the offer.

Nov. 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medical Societies.

THESE societies have all opened their new sessions. The opening night of the Medico-Chirurgical Society was promising and interesting. The attendance was good and the members remained even for private business. The officials are evidently anxious to put some life into the society. They have carried a proposition that clinical meetings should be held in the Royal Infirmary and the Royal Hospital for Sick Children, and they have obtained the permission of the directors of these institutions to hold such meetings. Professor T. R. Fraser has been elected President in succession to Mr. A. G. Miller and he will doubtless encourage any efforts directed towards making the society more attractive to all classes of members. At the Obstetrical Society Dr. James Ritchie becomes President in succession to Dr. Milne Murray. The Pathological Club has also resumed its meetings.

Scarcity of Water in Edinburgh.

Owing to prolonged drought extending over months the people of Edinburgh have been within measurable distance of water famine. Some of the reservoirs are empty; others contain millions of gallons less than the amount which they ought to contain at this season. Quite recently it was stated that there was only a fortnight's supply unless rain came. The city has been on short rations for weeks. The supply is cut off for a portion of every 24 hours, and houses where the cisterns are small and the consumption is considerable have been without water for hours daily. The rain has come, but it will take many days of constant downpouring to relieve the anxiety of the Water Trust.

Direct Representation on the General Medical Council.

Dr. W. Bruce of Dingwall seeks re-election as a Direct Representative and has issued his address to his constituents. Dr. Norman Walker of Edinburgh is formally in the field as his opponent, as is Dr. Charles E. Robertson of Glasgow.[1] Dr. Walker addressed a meeting in Edinburgh on Nov. 11th. The chair was occupied by Dr. G. A. Gibson, and a motion to the effect that Dr. Walker was a suitable candidate was moved by Dr. James Ritchie and seconded by Dr. Alexander James. There were about 60 persons present at the meeting, which was quite harmonious. Dr. Walker's policy may be briefly outlined as follows. He agreed with the Royal College of Physicians of London in favour of the removal of the scientific preliminary subjects from the curriculum into an entrance examination; in regard to the professional examinations he thought that the Council ought to see to their being levelled up; he objected to "drawing-room" lectures to women and the granting of midwifery certificates on such terms; as regards the dispensing of drugs he did not see that that could be interfered with; and as to the sale of scheduled poisons by unqualified assistants of medical men he entirely agreed with the position which the General Medical Council had taken up.

Glasgow University.

The adjourned meeting of the General Council of the Glasgow University was resumed on Nov. 6th. The Very Reverend Principal Story presided. The council was occupied for the most part with the consideration of reports from subcommittees dealing with the legal and medical faculties. The chief feature of the recommendations dealing with the medical ordinances was a somewhat radical suggestion proposing the development of practical classes at the expense of the present courses of systematic lectures. The report was moved by Dr. J. K. Kelly and seconded by Dr. D. C. McVail. It led to some discussion, but there was no active opposition and in the end it was adopted by the council. In relation to the question of practical teaching in midwifery Dr. Munro Kerr drew attention to the necessity for extending and improving the clinical opportunities offered by the present maternity hospital. He moved a proposition to the effect that the council should urge the University authorities to promote the development of a midwifery school in connexion with, or independently of, the existing hospital. This was seconded by Professor Murdoch Cameron, who said that he had long been desirous of a movement in this direction and had taken some practical steps to inaugurate it. From the Bellahouston trustees he had been promised a grant of £5000, from Lord Overtoun £5000, from Sir Charles Tennant £500, and from other sources sufficient to raise the total to £11,000. The foundation of an adequate maternity hospital was, he considered, necessary not only for purposes of clinical teaching but also directly in the public interest. It was needed both to meet the necessities of the poorer classes and to fit the medical student for responsible duties which almost certainly would come to him in his earlier practice. Professor Cameron strongly supported the proposal for the establishment of a large and efficient school of midwifery as a part of the University medical faculty and hoped that in it there would be taught both medical graduates and trained nurses. The Council unanimously approved of

[1] Dr. Robertson's and Dr. Norman Walker's addresses will be found at p. 1364 of our present issue.—ED. L.

the motion, which will therefore be sent as a recommendation to the University Court.—The November graduation ceremony took place on the 7th. Among the graduates were 19 who received the degree of M.D. Mr. David Louis Cairns, M.B., Ch.B., was awarded "honours" for his thesis, which was entitled "Researches on the Agglutinating and Prophylactic Properties of Blood-serum in Cases of Plague, with Observations on the Hæmatology and Bacteriology of the Disease." The following gentlemen received the degree "with commendation—viz.: John Aitken, M.B., Ch.B.; Arthur J. Ballantyne, M.B., Ch.B.; George Coates, M.B., Ch.B.; John Henderson, M.B., Ch.B.; and James D. R. Munro, M.A., M.B., C.M. Among those whose who received the ordinary degree were Miss Agnes Forbes Blackadder, M.A., M.B., Ch.B., and Miss Eva M'Call, M.B., Ch.B. The new graduates in the medical faculty included 24 who were capped M.B., Ch.B., and one who was admitted as M.B., C.M. Among the former were five of the lady students from Queen Margaret College.—The Senate are continuing during the present session the course of free lectures open to the general public, the hour being changed from 5 P.M. to 8.30 P.M. The lecturers are to be Professor Bradley Smart, Professor Raleigh, and Professor Bower, with Dr. T. H. Bryce, whose subject is to be "Prehistoric Man and his Monuments in the Island of Arran."

Glasgow Hospitals.

The Exhibition which has been such an important feature in the social life of Glasgow during the past six months and has now closed with a surplus of some £80,000 has brought indirectly a financial contribution to the Western Infirmary. The Exhibitors' Club has also closed with a surplus and this has been presented to the infirmary for the purpose of providing the apparatus necessary for the Finsen light treatment. The scheme for the reconstruction of the Royal Infirmary appears to be in complete abeyance. Arrangements are in progress for the building of new surgical theatres and for the improvement of some of the internal arrangements of the wards, but the more ambitious proposal remains for the present, at all events, in a state of suspended animation. It is understood that Dr. Moses Thomas who has for 34 years been the medical superintendent of the infirmary is to retire at the close of the present session with an allowance of £400 per annum.—Dr. Landel R. Oswald has been appointed physician-superintendent of the Royal Lunatic Asylum, Glasgow, in succession to Dr. Yellowlees. The position is worth £1000 a year with a free house, &c.—The Glasgow Parish Council has elected Mr. John Carswell to the charge of mental patients in the new eastern district hospital.—It has been decided to discontinue the publication of the Glasgow Hospital reports.

Municipal Elections in Glasgow.

The recent municipal elections in Glasgow have proved disastrous to the medical candidates. Among the retiring councillors who sought re-election were two members of the profession and each of these failed to carry the verdict of the electors.

The Plague in Glasgow.

There have been no further cases of plague in Glasgow, and the four patients who are in hospital are making satisfactory progress. The position was discussed in the town council on Nov. 11th, and it was resolved that plague should be included among the diseases compulsorily notifiable until Dec. 31st, 1902. One of the councillors wished to postpone this resolution until a further opinion had been obtained as to the nature of the cases at present in hospital. The council, however, were content with the opinion of their own medical advisers and resolved accordingly. The Lord Provost expressed the hope that the citizens would assist the authorities in getting rid of the rats by which the plague, in the view of the medical officer, may be spread. There is at present one case of small-pox in hospital and enteric fever has recently assumed somewhat disquieting proportions.

Nov. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

No less than 15 candidates have presented themselves for the examination for the Fellowship of the Royal College of Surgeons in Ireland which commences on Nov. 18th.

Precautions against Plague.

Following the advice of Sir Charles Cameron, the Public Health Committee of the Corporation of Dublin have decided on dealing with one of the elements of danger connected with the spread of bubonic plague. They are about to employ a rat poison known as "Haynes' desiccative paste," which not only kills these animals without delay, but also by its peculiar action dries up the flesh and mummifies it.

Irish Workhouse Association.

A conference of those interested in Poor-law administration was held in Belfast on Nov. 7th and 8th, under the auspices of the Irish Workhouse Association, Lord Monteagle presiding. On the first day Dr. J. M. Rhodes (Didsbury), President of the Poor-law Medical Officers' Association of England and Wales, read a paper on the Treatment of Imbeciles and Epileptics, at the beginning of which he showed by statistics that the proportion of insane per 10,000 was greater in Ireland than in any other European country, Spain being lowest with seven, Ireland's proportion being 46. The cases of certified insane in asylums in Ireland had risen in number from 8667 in 1880 to close upon 16,000 in 1899. In Great Britain and Ireland the State had done nothing to prevent the multiplication of the unfit (the feeble-minded and epileptic)—unless they considered the workhouse adequate. Dr. Rhodes recommended that there should be more brightness and cheerfulness in the workhouse wards, and said that it was a disgrace to our civilisation that there was in the United Kingdom no single State institution for the sane epileptic except the workhouse, and no class deserved more pity. A discussion followed, terminated by a vote of thanks to Dr. Rhodes for his paper. A paper and discussion on Casuals and Able-bodied Tramps followed. On the second day of the conference Mr. Robert Hall, visiting surgeon to the Belfast Union Infirmary, read a paper on Nursing in Infirmaries. He showed the immense strides which had been made in the Belfast Union Infirmary, pauper helps having been got rid of, and there being now a staff of 107 properly trained nurses. A new home to accommodate 140 nurses was in course of erection which in the near future would be fully occupied. He pointed out the method of appointing probationers in Belfast, the training they received, and the examination they had to pass, and he said that the Local Government Board accepted the six months' training of their maternity department in the infirmary—a most valuable matter for nurses. He spoke of the importance of the guardians of small unions taking care that adequate quarters and suitable food were provided for the nurses, and that their health was properly looked after. He praised the Local Government Board for their efforts to improve workhouse nursing and said, in conclusion, that the sick poor of Ireland could now enter the great majority of workhouse infirmaries with the full assurance that the nursing they would receive, and which they had a right to expect, would be of the highest possible standard. An interesting discussion, followed, and amongst the speakers, Mr. E. C. Thompson, M.P., surgeon to the Omagh County Infirmary, complained that the Local Government Board were not assisting the county infirmaries in connexion with nursing. He held that the whole system, not only of workhouse hospitals but of workhouses themselves, required the attention of the people of Ireland. Mr. G. L. St. George, surgeon to the County Antrim Infirmary, Lisburn, has written to the press complaining that nurses who have been thoroughly trained there and tested as to their capacity by extern examiners from the staff of the Belfast Royal Victoria Hospital are not considered by the Local Government Board fit to act as charge-nurses in Ireland because they have not over 100 beds and a house surgeon, though he lives only five doors from the hospital. Owing to these restrictions of the central authority in Dublin, people think, Mr. St. George alleges, that his nurses are not properly trained, while he contends that in a small hospital a nurse receives a better and more thorough training than in a large one.

The Ulster Medical Society.

The first meeting of the session 1901–1902 was held in the Museum, Belfast, on Nov. 7th, when the new President Professor W. Whitla, gave his inaugural address on Some Worthies on the Membership Roll of 1886. He gave interesting biographical sketches of members of the society who had died since that year. A vote of thanks, on the motion of Professor J. A. Lindsay, seconded by Dr. H.

Whitaker, was accorded to the President for his address. The annual dinner is to be held on the evening of Thursday, Nov. 21st. Four new members were elected at the meeting.

The Belfast Medical School.

The total number of students attending the Royal Victoria Hospital this session (1901–1902) is 143, being 12 less than last year. The number of medical students at Queen's College, Belfast, is also slightly less than last year, but in the Arts Faculty there is a much greater drop in the number of entries.

Nov. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Provincial Hospital Surgeons' Union.

I HAVE already mentioned[1] that Dr. Bousquet of Clermont took steps to convoke a meeting of provincial hospital surgeons just before the sitting of the Congress of Surgery for the discussion of the system whereby workmen injured in the course of their employment are admitted into the hospitals and treated at rates only drawn up for indigent patients. The meeting was held on Oct. 22nd, and Dr. Bousquet, after thanking his colleagues for their generous response to his appeal, proceeded to explain the object of the meeting—namely, the violation of the law concerning accidents to workmen, which operated so disastrously for the whole of the medical profession. The facts were these. When a workman was injured to any serious extent he was sent to a hospital where he was treated at a rate imposed solely for indigent patients. When this rate had been paid the employer, who alone was responsible by the new law for the expenses of the treatment of his men, considered that he was quite absolved from the payment of any more fees. The medical man who would have treated the patient had he not been taken to hospital was thus deprived of his fee and the hospital surgeon who did the work got no advantage out of it either. Thus if the loss was reckoned throughout the entire medical profession the figure mounted up to many millions of francs; for instance, in the department of the Seine alone the loss counted up to 15 million francs. Dr. Bousquet asked his colleagues to unite in putting an end to an abuse so harmful to the interests of the medical profession. Dr. Lande said that the members of hospital staffs were wrong not to lay more stress upon the regulation for hospital administration which provided that a hospital should be kept for the poor and that patients who were not poor should be made to pay for professional treatment and medicine in addition to the cost of food and lodging. The speaker pointed out that to treat patients who could pay at the rate of poor persons—a rate which varied from two to five francs per diem—was prejudicial to the interests of the Assistance Publique. For instance, a patient in a hospital on whom laparotomy had been performed cost the hospital, only for the expenses of the operation, the dressings, and the drugs, at least 150 francs, while if he stayed in the hospital for one month at three francs per diem he paid 90 francs. Therefore the deficit had to be made up out of the funds for gratuitous medical assistance—that was to say, practically by the poor themselves. After some further discussion the meeting unanimously passed the following resolution in conformity with the decisions arrived at by the Congress of Deontology:—

That this meeting of provincial hospital surgeons unanimously pledges its members to demand from their various Members of Parliament a new reading of article 4 of the law of 1898.

A committee of four members was appointed to form a deputation to the Minister of the Interior to lay before the Director of the Assistance Publique the grievances of the medical profession and to try their utmost to get him to apply, by means of administrative committees under himself, the strict regulations of the Assistance Publique. Resolutions were also adopted to the effect that the permanent Committee for Professional Medicine should by circular call the attention of hospital administrations to the abuse of hospitals caused by the treatment of injured workmen and asking them to make such persons pay a higher rate than that appointed for poor patients; and that the fees of the medical men and apothecaries should be paid in separately to the hospital administrations who could then divide them among those to whom they were owed, unless the hospital authorities preferred that the medical men and apothecaries should be paid directly. If these reforms were not carried out it was decided that every hospital surgeon before undertaking the treatment of a patient should inform the hospital authorities that his fees were not included in the sum paid for the residence of the patient in hospital, and that he should reserve the right to sue for such fees unless they were paid to him through the intermediation of the hospital authorities. The proposed alteration of Article 4 of the law of 1898 will make it run as follows:—

The contractor is the person who shall be always and directly responsible for both preliminary medical expenses such as certificates and attendance, whether given at the injured party's home or at the hospital, for expenses of drugs, for hospital expenses, and any special apparatus furnished by the hospital or any other institution, and finally for burial expenses. These last shall not exceed 100 francs at the most. The injured party, whether directly after his accident or at any time during his course of treatment, shall be at liberty to choose, either by himself or his representative, his medical man or his apothecary from those who live in his own neighbourhood. In case of dispute the amount of the bill for medical and pharmaceutical expenses shall be fixed by the magistrate of the parish, according to the workman's tariff in use in that parish. The contractor on his side can submit to the magistrate the name of a medical man who will have the right to make periodical inspections of the patient so long as such inspection does not interfere with his treatment.

The Hygiene of Railway Tunnels.

The Paris Prefect of Police, M. Lépine, recently requested M. Gréhant, Professor of Physiology at the Museum, to analyse the air in the tunnels and carriages of the Metropolitan Railway. M. Gréhant's report has just been issued. He states that, beginning from Oct. 18th, he made 100 analyses of the air in the carriages and obtained some important results. Even in the second-class carriages, which are generally packed, the carbonic acid never reached 1 per cent. and the oxygen was diminished in equivalent proportion. The air samples taken outside the carriages and in the intervals between the tunnels contained no excess of carbonic acid and very nearly the normal proportion of oxygen. M. Gréhant concludes from this that the sole cause of the fouling of the air is the respiration of the passengers, for the trains, which are very frequent and are always travelling quickly in opposite directions, act as powerful ventilators and effect a change of air through the entrance and exit doors of the stations.

Nov. 12th.

[1] THE LANCET, Oct. 26th, p. 1163.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of Rome in 1900.

THE annual abstract of the Statistical Bulletins for the commune of Rome lately issued reveals a considerable increase in the death-rate of the city for 1900 over that of the previous year. In 1899 the exceptionally low rate of 17·2 per 1000 inhabitants was recorded, whereas in the succeeding year it rose to 20·2 per 1000. The report does not make it clear how the latter result was arrived at, but it is certain that the former is understated owing to some unfortunate blunder in estimating the population which has never been satisfactorily explained. By the census taken on Feb 10th, 1901, it was definitely ascertained that the total number of inhabitants was then 467,992, whereas the official estimate of the population on Dec. 31st, 1900, was no less than 521,159. On the 512,423 at which it had been estimated for the corresponding date of 1899 a very considerable reduction would require to be made in order to arrive at the true figures, and an equivalent increase must therefore result in the estimated death-rate. From the following table it will be seen how the death-rate of Rome compares with that of some other large cities of Europe during 1900:—

	Rate of mortality per 1000 inhabitants.		Rate of mortality per 1000 inhabitants.
Brussels	16·4	Vienna	20·6
London	18·7	Glasgow	21·9
Edinburgh	19·3	Liverpool	25·6
Berlin...	19·3	St. Petersburg ...	27·0
Rome	20·2	Dublin	27·9
Paris	20·5	Moscow	30·0

The chief cause of mortality was pneumonia, which accounted for no less than 1216 out of the total of 9937 deaths, or 12·24 per cent. of the whole. Next in importance as causes were pulmonary tuberculosis (830 deaths), bronchitis (523), apoplexy (499), measles (253), and enteric fever (248). Influenza was responsible for 154 deaths, syphilis for 128, and malaria for 123. It will doubtless be noticed by many with surprise how comparatively trifling is the mortality from malaria in this city, where "Roman fever" even yet is a name of terror to the majority of newcomers. For every victim claimed by that disease twice as many succumbed to typhoid fever and nearly ten times as many to pneumonia. Beyond all question the winter visitor, not only to the Eternal City but to Italy generally, has much more to dread from the deadly pneumococcus than from the malarial microbe, or even from the ubiquitous bacillus of typhoid fever. Against the latter two he can at least take precautions by avoiding the now well-known causes of infection, and even if attacked can hope for much help from skilful treatment, however severe the seizure may be. But who can tell him where the mysterious diplococcus springs from which breeds an attack of pneumonia? And what chances of recovery can we hold out when the malady assumes that virulent form so frequent in Italy which no remedy appears to control and which often carries off the young and robust with the same startling rapidity as it does the old and feeble? The outbreak of typhoid fever, or rather the extension of the endemic already existing, raised the death-rate from that cause to quite an abnormal extent. Usually the rate of mortality from enteric fever in Rome oscillates between 3 and 5 per 10,000 inhabitants, but in November and December of 1900 it rose to 11·5 and 14·7 respectively. The mean for the year was 4·9, which is higher than anything recorded since 1888, when the relative mortality rose in the month of October to 10·4, and the mean for the year was also 4·9. Gualdi has ascribed the increase in the years preceding 1888 to the influx of workmen consequent on the activity in building which took place at that time, and he considers that a similar cause operated in the years 1898, 1899, and 1900, since the great majority of cases notified in these years occurred amongst the masons and labourers engaged in that class of work. The case-mortality of typhoid fever was 14·5 per cent. out of a total of 1704 cases notified during 1900. The statistics of suicides, of which there were 88, showed a preponderance of male over female deaths in the proportion of nearly 3 to 1 (64 males and 24 females). Of the suicides by males 18 persons threw themselves from heights, while 20 killed themselves with firearms, 13 by drowning, and six by poison. Among the females the favourite way in Rome of putting a violent end to life would appear to be by the first (11 deaths) and the last (nine deaths) of these methods. It appears from one of the tables given in the abstract that the deaths amongst the non-resident population last year were unusually numerous—namely, 1948. In this fact lies the explanation, at least in part, of the augmented mortality. During this "Anno Santo"—or "Anno Sporco" (dirty year) as it was popularly called—Rome was filled with pilgrims from all parts of Christendom who not only added to the death-rate by force of numbers (of which no official record was kept) but doubtless imported the germs of various infectious diseases amongst the permanent residents. The dirty, unkempt appearance and unwholesome odour of many of these visitors suggested such a result, and, indeed, considering their numbers and the length of time over which the presence of these pilgrims extended, one is surprised that the public health did not suffer a great deal more from their invasion.

Nov. 11th.

SANATORIUM AT DELAMERE.—Manchester has not been long in following Liverpool to Delamere. The first sod of the new branch sanatorium at Delamere, which will be connected with the Manchester and Salford Hospital for Consumption and Diseases of the Chest, was cut on Nov. 2nd by Mrs. Crossley, whose husband, Mr. W. I. Crossley, has been a most munificent supporter of the institution. Indeed, it is owing to his generosity that the sanatorium at Delamere has been made possible. There will be 75 beds in the main building, while the nurses' and servants' home will form a separate block. 65 acres of land with a south aspect have been secured. They are in the parish of Kingsley within the precincts of the forest.

Obituary.

HENRY SPENCER SMITH, F.R.C.S. ENG.,

CONSULTING SURGEON TO ST. MARY'S HOSPITAL.

MR. HENRY SPENCER SMITH, who died on Oct. 29th at his residence in Oxford-terrace, Paddington, played an important part in the early history of St. Mary's Hospital. The greater part of his professional education was received at St. Bartholomew's Hospital, where he entered as a student in 1832, and was a pupil of Mr. (afterwards Sir William) Lawrence. To widen his experience he spent several months in Paris, and in 1837 he was admitted a Member of the Royal College of Surgeons of England, after which he held the office of house surgeon at St. Bartholomew's Hospital and surgeon to the Royal General Dispensary, Aldersgate-street. When St. Mary's Hospital was instituted in 1851 Mr. Smith was appointed one of the three assistant surgeons, the other two being, as mentioned in THE LANCET of Sept. 27th, 1851, p. 301, Mr. Haynes Walton and Mr. James Lane. The surgeons of the original staff were Mr. Coulson, Mr. Lane, and Mr. Ure. In 1854 a movement took shape for the purpose of forming a medical school at St. Mary's Hospital, a meeting being held with that object on April 24th, and recognition by the Royal College of Surgeons of England followed in the same year. Mr. Smith was appointed to the important office of dean of the school and for six years he laboured unremittingly at the work in all its details. He had herein an opportunity of showing considerable administrative talent, and the appreciation which his success evoked was shown by the fact that when he resigned the post in the middle of 1860 and was succeeded by Mr. G. G. Gascoyen he was presented by the students with a piece of plate weighing 101 ounces and by the lecturers with a silver-gilt inkstand. For many years he was one of the lecturers on surgery in the school. He was a member and the secretary of the first Government commission of inquiry into the question of venereal disease as occurring in the navy and the army and was also a secretary and a vice-president of the Royal Medical and Chirurgical Society. Mr. Smith was one of the 150 Fellows of the Royal College of Surgeons of England chosen when that order was created in 1843, and the death of Mr. Carsten Holthouse last July left him as the sole survivor of those original holders of the Fellowship. From 1867 to 1875 he was a member of the Council and in 1872 he was elected a member of the court of examiners. Mr. Smith translated from the German "Schwann's Microscopic Researches into the Accordance in the Structure and Growth of Animals and Plants," which was published by the Sydenham Society and for which the translator in 1845 was awarded the Copley medal of the Royal Society. Mr. Smith also translated Professor Bischoff's memoir "On the Periodical Maturation and Extrusion of Ova, independently of Coitus, in Mammalia and Man." Mr. Spencer Smith, who was in his eighty-ninth year at the time of his death, has left a widow and a son and a daughter by a previous marriage.

SIR JAMES WILSON AGNEW, M.D. GLASG., M.R.C.S. ENG.

BY the death of Sir James Wilson Agnew, which occurred on Nov. 8th, we are once more reminded of the valuable work done by medical men in a political direction. James Wilson Agnew was born in 1815 and became a Member of the Royal College of Surgeons of England in 1838, graduating as M.D. of the University of Glasgow in 1839. About a year later he went out to Tasmania and practised as a physician in Hobart for some years. From 1877 to 1881 he was a member of the Legislative Council of Tasmania, while from 1886 to 1887 he was Premier and Chief Secretary. He was also for many years a member of the Tasmanian Council of Education. The medical man, even if he follows no other calling but a purely professional one, is a most useful member of the body politic, but when he takes up politics in addition he is often even more useful. We have only to mention the names of Fayrer, Rutherford Alcock, John Kirk, James Mackie, and Jameson—despite the error into which the last-named fell with regard to the Transvaal—to tell how the work of empire has been aided by the toils of medical men. The foundation of our Indian Empire practically sprang from certain concessions granted by the Emperor of Delhi to Gabriel Broughton, a

surgeon of the East India Company. Sir James Agnew added the name of one more medical man to the list and we doubt not that our profession will supply many others who will be in the best sense of the word patriots in that they will strengthen the empire of which they are proud to be free subjects.

ALFRED HUTCHISON SMEE, M.R.C.S. ENG., J.P.

MR. A. H. SMEE, who died on Nov. 8th at his residence, The Grange, Hackbridge, Surrey, was a director of the Gresham Life Assurance Society and its chief medical officer. He was naturally much interested in preventive and statistical medicine and contributed many articles and papers to professional journals. He received his medical education at St. Bartholomew's Hospital. Only just before his death he published a volume entitled, "Tables and Diagrams Illustrating the Comparative Death-rates from Various Causes and Various Occupations." The design of the work is to bring out in relief by means of diagrams the comparative rates of mortality experienced under various conditions, the figures for which have already been published, but which as figures cannot be so readily grasped and compared. In addition to his more purely professional work Mr. Smee was a J.P. for Surrey, a member of the Surrey County Council, a Fellow of the Chemical Society, and a Fellow of the Institute of Chemistry, to which he contributed many papers of chemical interest.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Samuel Jones, Professor of Ophthalmology and Otology in the Chicago Medical College.—Dr. J. H. Chievitz, Professor of Anatomy in the University of Copenhagen.—Dr. Nicolas Abaza, a member of the Russian Imperial Council.—Dr. Teodoro Yanez y Font, Professor of Forensic Medicine in Madrid.—Dr. Alvarenga, formerly Professor of Therapeutics in the Rio de Janeiro University.—Dr. Enrique Castro, Professor of Therapeutics in the University of Montevideo.—Dr. Stelzner, formerly Chief Surgeon of the Dresden Municipal Hospital. He was 62 years of age.—Dr. Marcel Nencki, an eminent physiologist of St. Petersburg and formerly of Berne. His published researches covered a great deal of ground and dealt especially with bacteriology, the alkaloids of putrefaction, and ptomaines. He was 55 years of age.—Dr. J. Magaz y Jaime, formerly Professor of Physiology in the University of Madrid.—Dr. Arthur König of the Berlin Physiologicar Institute, whose researches on physiological optics are well known, his assistance having been utilised by Professol Helmholtz in the preparation of some of his works.—Dr. A. Villard, a well-known Marseilles physician.—Professor Karl Schuchardt, Director of the Surgical Department of the Stettin Municipal Hospital. He was at one time assistant to Professor Volkmann in Halle. His published papers included several on the surgery of the stomach and the intestines and on cancerous tumours. He was only 45 years of age. The cause of death was septicæmia contracted while performing an operation.—Professor Gustav Veesen, who in early life was a student of Oriental literature and theology under Gesenius, subsequently turning his attention to medicine and practising both in England and Russia, but finally returning to his former profession. He was 86 years of age.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on Nov. 7th the following degrees were conferred:—

Bachelor of Medicine.—O. Inchley, St. John's; T. E. Holmes, Gonville and Caius.

Bachelor of Medicine and Bachelor of Surgery.—G. S. Graham-Smith, Pembroke.

A demonstratorship in surgery, under the direction of the Reader, Mr. Joseph Griffiths, is about to be established. The duties will include the care of the collections to be housed in the new Humphry Museum.—Dr. L. E. Shore, of St. John's, has been appointed University Lecturer in Advanced Physiology; Mr. F. F. Blackman, St. John's, University Lecturer in Botany; and Mr. H. O. Jones Jacksonian Demonstrator in Organic Chemistry.—In April and October of the present year 69 candidates presented themselves for one or both parts of the State medicine examination. 43 obtained the diploma on passing both parts.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS.—The following candidates have passed the examinations indicated:—

Final Professional Examination.—(a) In all subjects: J. F. Fitzgerald; *(b) Completed Examination:* J. M. Barry, Miss M. E. Bridgford, C. W. Conry, A. D. C. Cummins, S. G. Gordon, W. R. Meredith, S. R. McCausland, F. G. Sharpe, R. C. Vernon, R. O. White, G. B. Wilkinson, F. W. Woods, and T. J. Wright.

Diploma in Public Health.—Lt.-Col. U. J. Bourke, R.A.M.C.; M. J. B. Costello, M.B., R.U.I.; H. A. Dougan, M.B. Dub.; D. P. Ffrench, L.R.C.P., L.R.C.S. Edin.; R. Fox Symons, M.R.C.S. Eng., L.R.C.P. Lond.; A. Moore, M.D.; J. H. M'Auley, L.R.C.P. & S. Edin.; C. J. Powell, F.R.C.S. Irel.; and C. L. Sansom, F.R.C.S. Edin.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. J. Heller has been recognised as *privat-docent* of Dermatology, and Dr. E. Rost as *privat-docent* of Pharmacology.—*Christiania:* Dr. H. A. Schiötz has been appointed Professor of Ophthalmology.—*Cracow:* Dr. Bochenek has been recognised as *privat-docent* of Anatomy, and Dr. Krzysztalowicz as *privat-docent* of Dermatology.—*Marburg:* Dr. Ernst Romberg has been promoted to an Extraordinary Professorship of Medicine, and Dr. H. Bonhoff to an Extraordinary Professorship of Hygiene.—*Rostock:* Dr. Theodor Thierfelder, Director of the University Medical Clinic and the senior member of the faculty, has been obliged to retire on account of the state of his health. Dr. Martius of the Policlinic has been appointed to succeed him.—*Vienna:* Dr. Karplus has been recognised as *privat-docent* of Neurology and Psychiatry.

EXETER DISPENSARY.—A special meeting of the governors of the Exeter Dispensary was held on Nov. 2nd to elect an honorary surgeon in succession to Dr. A. W. Kempe, resigned. There were five candidates and eventually Mr. Henry Andrew was elected. One of the governors, in drawing attention to the fact that the institution did not allow canvassing by candidates, said that many governors felt that it was exceedingly undesirable that the merits of any particular candidate should be stated in the local press before the election took place as had been done on this occasion.

A QUIETER LONDON.—At a recent Conference upon the Abatement of Street Noises held at 1, Finsbury-circus, London, E.C., under the presidency of Mr. Robert Pierpoint, M.P., it was decided that the petition to the authorities should remain open during the present month, also that a deputation should be appointed to wait upon the Home Secretary, requesting him to facilitate the adoption of more stringent by-laws respecting street-music, street-shouting, and other unnecessary noises.

PUBLIC SUPPLY OF DIPHTHERIA ANTITOXIN.—The Public Health Department of Bristol have determined to supply medical practitioners with antitoxin for poor people suffering from diphtheria who are unable to pay for the preparation. Forms on which the application should be made have been supplied to the local members of the medical profession and should be forwarded by them to the medical officer of health (Dr. D. S. Davies).

BICYCLES AND LEGAL "INFANCY."—At the Falmouth County Court on Nov. 7th a young man was summoned by a bicycle-dealer for damage to a bicycle. Defendant pleaded that he was an "infant," having been born in 1883. His Honour Judge Grainger gave judgment for the plaintiff, adding that the plea of infancy could not prevail in this case as the bicycle had become necessary for young men in health.

PORTRAIT OF EDWARD JENNER.—Messrs. Fletcher, Fletcher, and Co., of Holloway, N., have issued as No. 18 of the Vibrona Art Series of Pictures a reproduction of James Northcote's painting in the National Portrait Gallery of Edward Jenner. The reproduction is a pleasing one, in sepia, on plate paper, and may be obtained for 2*s.* 6*d.*, post-free.

LITERARY INTELLIGENCE.—We have received from the Oxford University Press, ever prompt and admirable in their printing enterprises, a copy of the new Prayer Book containing the prayers for George Prince of Wales and the Princess of Wales, and the new Accession Service which was authorised by Royal Warrant this week.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. W. A. Dingle, M.D. St. And., L.R.C.P. Lond., M.R.C.S. Eng., was on Oct. 31st presented with a silver fruit-basket and vases, in testimony of his good service to the inhabitants of Finsbury-square, London, E.C., as the honorary secretary of the square committee.

VACCINATION GRANT.—MR. Philip E. Hill, M.R.C.S. Eng., public vaccinator for the Crickhowell district of the Crickhowell Union, has been awarded the Government grant for efficient vaccination for the twelfth time in succession.

THE BISHOP OF LONDON will unveil a window in the chapel of the Cancer Hospital, Fulham-road, London, S.W., erected in memory of the late Dr. William Marsden who founded the charity in 1851. The ceremony is fixed for to-day (Saturday, Nov. 16th) at 3 P.M.

LONGEVITY.—It is stated on the authority of the *Tribune de Genève* that there has recently died in Albania a man named Ismail Hudgo, who was alleged to have been born in 1741 and was therefore at the time of his death apparently 160 years of age.

MEDICAL MAYOR.—At the meeting of the Glastonbury Town Council held on Nov. 2nd it was decided to offer the post of mayor to Dr. Maurice John Doidge, who signified his acceptance of the honour.

MR. GEORGE MITCHELL WINTER, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., D.P.H. Cantab., has been elected an alderman for the borough of Torquay, receiving more votes than any of the other successful candidates.

DRAINAGE OF TROWBRIDGE.—At a recent meeting of the Trowbridge Urban Council it was decided to adopt a sewage-disposal scheme for Trowbridge, at an estimated cost of nearly £24,000.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156, Charing-cross-road, W.C.
Wonders in Monsterland. By E. D. Cuming, author of "In the Shadow of the Pagoda," "With the Jungle Folk." With illustrations by J. A. Shepherd. Price 6s.

CHAPMAN AND HALL, Limited, 11, Henrietta-street, Covent-garden, W.C.
Anticipations of the Reaction of Mechanical and Scientific Progress upon Human Life and Thought. By H. G. Wells, author of "Love and Mr. Lewisham," "Tales of Space and Time," &c. Price 7s. 6d.

FROWDE, HENRY, Amen-corner, E.C.
Hausa Notes. By Walter R. Miller, M.R.C.S. Eng., L.R.C.P., Church Missionary Society.

GREEN, WILLIAM, AND SONS, Edinburgh.
The Accessory Sinuses of the Nose. Their Surgical Anatomy and the Diagnosis and Treatment of their Inflammatory Affections. By A. Logan Turner, M.D., F.R.C.S. Edin. Price 12s. net.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin.
Bibliothek von Coler. Herausgeber O. Schjerning.
Band VII. Grundriss einer Geschichte der Kriegschirurgie. By Prof. Dr. Alb. Köhler, Oberstabsarzt. Price M4.
Band VIII. Die Pest und ihre Bekämpfung. By Dr. P. Musehold, Oberstabsarzt, Vorstand der Hygienisch-bakteriologischen Untersuchungsstelle des XV. Armeecorps. Price M7.
Band IX. Die Cerebrospinalmeningitis als Heeresseuche. By Dr. H. Jaeger, Oberstabsarzt, Privatdocent für Hygiene und Bakteriologie. Price M7.
Band X. Die Therapie der Infectionskrankheiten. By Professor Dr. C. Gerhardt, Geh. Med.-Rath., &c., in collaboration with Dr. Dorendorf, Professor Dr. Grawitz, Dr. Hertel, Dr. Ilberg, Dr. Landgraf, Professor Dr. Martius, Dr. Schulz, Dr. Schultzen, Dr. Stuertz, and Dr. Widenmann. Price M8.

HUTCHINSON AND CO., Paternoster-row, E.C.
he Hero. By William Somerset Maugham, author of "Liza of Lambeth." "The Making of a Saint," "Orientations." Price 6s.

KARGER, S., Karlstrasse, 15, Berlin.
Atlas der Krankheiten der Nase. By Privat-docent Dr. P. H. Gerber. Parts V., VI., and VII. Price 6 marks each.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.
The Diagnostics of Internal Medicine: A Clinical Treatise upon the Recognised Principles of Medical Diagnosis, prepared for the use of Students and Practitioners of Medicine. By Glentworth Reeve Butler, A.M., M.D., of Brooklyn, N.Y. Price not stated.
Manual of the Diseases of Children. By John Madison Taylor, A.M., M.D., of Philadelphia, and William H. Wells, M.D., of Philadelphia. Second Edition, thoroughly revised and enlarged. Price 21s.
Introduction to the Differential Diagnosis of the Separate Forms of Gall-stone Disease, based upon his own experience gained in 433 Laparotomies for Gall-stones. By Professor Hans Kehr, Halberstadt. Authorised translation by William Wotkyns Seymour, A.B. Yale, M.D. Harvard. Price 9s. net.
Kimpton's Pocket Formulary for 1901. By E. Quin Thornton, M.D., of Philadelphia. Third Edition, revised and enlarged. Price 7s. 6d. net.

LANE, JOHN, the Bodley Head, London and New York.
The Book of Old-fashioned Flowers and other Plants which Thrive in the Open-air of England. By Harry Roberts, author of "The Chronicle of a Cornish Garden." Price 2s. 6d.

LEHMANN, J. F., Landwehrstrasse, 70, Munich.
Lehmann's Medizinische Handatlanten. Band IV. Atlas und Grundriss der Krankheiten der Mundhöhle, des Rachens und der Nase. By Dr. L. Grünwald of Munich. Second, revised, and enlarged edition. Price M. 12.
Sehprobentafeln zur Bestimmung der Sehschärfe für die Ferne. By Dr. v. Ammon, K. Oberarzt und Augenarzt in München. Six test-sheets with explanatory pamphlet. Price M 3.

LEWIS, H. K., 136, Gower-street, W.C.
Transactions of the Dermatological Society of Great Britain and Ireland. Volume VII. 1900–1901. Edited by Charles Herbert Thompson, M.D., and Ernest Graham Little, M.D. Price 5s.

LIPPINCOTT, J. B. COMPANY, Philadelphia and London.
Photographic Atlas of the Diseases of the Skin. By George Henry Fox, A.M., M.D., of New York. Parts VII., VIII., IX., X., XI., XII. Price not stated.
Pediatrics: the Hygienic and Medical Treatment of Children. By Thomas Morgan Rotch, M.D., Professor of the Diseases of Children, Harvard University. Third Edition, rearranged and rewritten. Price not stated.
Principles and Practice of Operative Dentistry. By John Sayre Marshall, M.D. (Syr. Univ.), Dental Surgeon, United States Army, President, Army Examining Board for Dental Surgeons. Price not stated.

LIVINGSTONE, E. AND S., Edinburgh.
Handbook of Public Health. By John Orr, M.D., F.R.C.P. Edin., M.R.C.S. Eng. Price 4s. net.

LONGMANS, GREEN, AND CO., London.
Transactions of the Clinical Society of London. Volume XXXIV. Price not stated.

MALOINE, A., 23, 25, rue de l'Ecole de Médecine, Paris.
Guide de l'Examen Gynécologique. By Dr. L. Léon Archambault Price 3fr.

MURRAY, JOHN, Albemarle-street, W.
A First Course of Practical Science, with full Directions for Experiments and numerous exercises. By J. H. Leonard, B.Sc. Lond. With a Preface by Dr. J. H. Gladstone, F.R.S. Price 1s. 6d.

OLIVER AND BOYD, Edinburgh.
The Transactions of the Edinburgh Obstetrical Society. Vol. XXVI. Session 1900–1901. Price not stated.

PENTLAND, YOUNG J., Edinburgh and London.
The Principles and Practice of Medicine. Fourth edition. By William Osler, M.D., LL.D. Edin., F.R.S., F.R.C.P. Price 24s.
Text-book of Pharmacology and Therapeutics. Edited by W. Hale White, M.D., F.R.C.P., Physician to, and Lecturer on Medicine at, Guy's Hospital, London. Price not stated.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin, N.
Lehrbuch der Gynäkologie. By Max Runge of Göttingen Price M10.

STOCK, ELLIOT, 62, Paternoster-row, E.C.
Scientific Research: A View from Within. By Stephen Smith, M.R.C.S. Eng. First Edition. Price 2s.

VIGOT FRÈRES, 23, Place de l'Ecole de Médecine, Paris.
Les Gardes-malades. By Mlle. Dr. Hamilton of Bordeaux and Dr. Félix Regnault, editor of the *Correspondant Médical*. Price 3 francs.

VINTON AND CO., LIMITED, 9, New Bridge-street, E.C.
Baily's Hunting Directory, 1901–1902. By the Editor of "Baily's Magazine of Sports and Pastimes." Price 5s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BARTON, G. A. H., M.D. Brux., M.R.C.S., L.S.A., has been appointed an Honorary Anæsthetist to the City Orthopædic Hospital.

BEADNELL, GEO. D., M.R.C.S.E., L.R.C.P. Edin., M.D. Canada, J.P., has been appointed by the Government of British Columbia Resident Physician for Denman and Hornby Island, Canada.

CLARK, PERCY J., L.S.A., M.R.C.S., has been appointed Assistant Medical Officer to the London Dispensary, Spitalfields, vice C. B. Dale, M.R.C.S., L.R.C.P., resigned.

COLES, CHARLES, M.D. Lond. has been appointed Medical Officer of Health for the Bicester, Chipping Norton, Henley, Thame, Witney, and Woodstock Rural and Urban Districts, Hambledon, Headington, and Long Crendon Rural District, and Wheatley Urban District.

CORBITT, J. A., M.B., B.S. R.U.I., has been appointed Certifying Surgeon under the Factory Acts for the Bangor District of County Down.

EMPSEY, PATRICK, F.R.C.S.I., M.R.C.S., L.R.C.P., has been appointed Surgeon for Diseases of the Throat and Nose to the Mater Misericordiæ Hospital, Dublin.

GIBSON, C. G., M.D. Edin., has been re-appointed Medical Officer of Health for the Broadwood Widger and Launceston Rural District Council.

GLENNY, EDMUND, L.R.C.P.I., L.R.C.S.I., has been appointed Junior House Surgeon to Jervis-street Hospital, Dublin.

HARDWICK, ARTHUR, M.D. Durh., L.S.A. Lond., D.P.H. Lond., has been appointed Medical Officer of Health for three years for Newquay, Cornwall.

HEAVEN, JOHN COOKESLEY, L.R.C.P., M.R.C.S., L.S.A., D.P.H. Lond., has been re-appointed Medical Officer of Health by the Keynsham Rural District Council.

IRVINE, H. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Dispensary Medical Officer for Belfast No. 13 and Castlereagh No. 1 Districts, vice Mr. James Irvine, resigned.

LANDER, H. W. G., M.B. Edin., has been appointed Medical Officer by the Derwent Valley Water Board for their workmen's village.

MCLORINAN, W., L.R.C.P.I., L.R.C.S.I., has been appointed Dispensary Medical Officer of Cushendall and Waterfoot Dispensary, Co. Antrim.

PADWICK, J. C., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Borough and Rural District of Bridgnorth.

PITTER, ROBERT A., L.S.A., &c., has been appointed Clinical Assistant to the Out-patient Department of the North London Hospital for Consumption.

PRENTICE, R. W., L.S.A., has been appointed Medical Officer to the District Council, Ringwood.

RUTLEDGE, C. J., L.R.C.S.I., has been appointed Medical Officer of Health in South Australia.

SERJEANT, H., L.R.C.P.S. Edin., has been appointed Public Vaccinator to the Borough Council of Camberwell.

TARR, W., M.B. Edin., has been appointed District Medical Officer, Yeovil Union, in the room of Mr. G. C. Wilkin, resigned.

THOMPSON, JAMES ARTHUR, M.B., B.Ch., B.A.O. T.C.D., has been appointed Senior House Surgeon to Jervis-street Hospital, Dublin.

TURNER, A. H., L.S.A., has been appointed Medical Officer of Health for the Beaconsfield Urban District.

VERCO, C. A., M.B., has been appointed Resident Medical Officer at Adelaide Hospital, Australia.

VIOLETTE, W. B., M.B. Glasg., has been appointed Medical Officer of Public Institutions at Parramatta, New South Wales, Australia.

WALKER, EDYTHE M. S., M.B Glasg., has been appointed an Assistant Medical Officer at the Workhouse, Township of Toxteth Park, in the room of Miss A. P. Blackadder, resigned.

WATERS, C. H., M.B. Edin., has been appointed Public Vaccinator at Mount Malcolm, Western Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BEVERLEY DISPENSARY AND HOSPITAL.—Medical Officer and Dispenser. Salary £160 per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer, also Resident Surgical Officer. Salary of each office £60 per annum, with board, washing, and attendance.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 per annum, with apartments, board, attendance, &c.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Resident Medical Officer, unmarried. Salary £60 per annum.

CHESTER GENERAL INFIRMARY.—House Physician. Salary £90 per annum, with residence and maintenance.

COUNTY ASYLUM, Mickleover, Derby.—Senior Assistant Medical Officer. Salary £150, rising to £180 per annum, with apartments, board, washing, and attendance. Also Junior Assistant Medical Officer. Salary £120, rising to £150 per annum, with apartments, board, washing, and attendance.

COUNTY ASYLUM, Prestwich, Manchester.—Junior Assistant Medical Officer, unmarried. Salary £150, increasing to £250, with board, apartments, and washing.

COUNTY OF EAST SUSSEX.—Medical Officer of Health. Salary £200 per annum, with fees, &c.

CROYDON GENERAL HOSPITAL.—Senior and Junior House Surgeons, unmarried. Salary, senior £105, junior £60, with board, laundry, and residence.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician, for six months. Honorarium of £25, with board and residence.

ESSEX COUNTY ASYLUM, Brentwood.—Fourth Assistant Medical Officer. Salary £150 per annum.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary £100 per annum, with board, residence, and washing.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Fifth Assistant Medical Officer, unmarried. Salary £170, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL.—Surgeon to Out-patients.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £75 per annum, with residence, board, and washing.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Surgeon.

KING'S COLLEGE, London.—Demonstrator of Pathology and Bacteriology.

METROPOLITAN ASYLUMS BOARD ASYLUM, Caterham, Surrey.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £170, with rations, lodging, attendance, and washing.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers, unmarried, at the Fever and Small-pox Hospitals. Salary £160 per annum during the first year, £180 the second year and £200 the third and subsequent years, with board, lodging, attendance, and washing.

MIDDLESEX HOSPITAL, W.—Medical Officer and Registrar to the Cancer Department. Salary £100 per annum, with board and residence.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160, increasing to £180.

NEW HOSPITAL FOR WOMEN, Euston-road.—House Physician, House Surgeon, and Clinical Assistant (females), for six months.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and also Assistant Resident Medical Officer. Salary at rate of £50 per annum attaches to each post, with board, residence, and washing.

NOTTS COUNTY ASYLUM.—Assistant Medical Officer (temporarily). Four guineas per week, with board, lodging, attendance, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Dental Surgeon.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon, for six months. Salary at rate of £80 per annum, with board and residence.

ROYAL ALBERT EDWARD INFIRMARY, Wigan.—Junior House Surgeon. Salary £80 per year, with rations and apartments.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—Assistant Surgeon.

ROYAL DEVON AND EXETER HOSPITAL, Exeter.—Junior Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer, for four months. Salary at rate of £70 per annum.

ROYAL INFIRMARY, Sheffield.—Casualty Officer. Salary £100 per annum, with board, lodging, and washing.

ROYAL SEA BATHING HOSPITAL, Margate.—Resident Surgeon, to act as Junior for six months and then as Senior for the like period. Salary at rate of £80 and £120 per annum respectively, with board and residence.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Strand, W.C.—Clinical Assistants for six months.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow, E.—Assistant Resident Medical Officer (unmarried) for six months. Salary £80 per annum, with board, residence, laundry, &c.

SOMERSET AND BATH LUNATIC ASYLUM, Cotford, Taunton.—Assistant Medical Officer, single. Salary £150 per annum, with apartments, board, and washing.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with food and residence.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon. Salary £200 per annum.

WINDSOR AND ETON ROYAL DISPENSARY AND INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with residence, board washing, and attendance.

WORCESTER COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer. Salary £120 per annum, increasing to £150, with board, apartments, and washing.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory Acts at Chapeltown, in the West Riding of the county of York; at North Currey, in the county of Somerset; and at Peebles, N.B.

Births, Marriages, and Deaths.

BIRTHS.

GILPIN.—On 9th Nov., the wife of E. Harrison Gilpin, M.R.C.S., L.R.C.P., L.S.A. Lond., of a son.

OSBORN.—On Nov. 11th, at Ennismore House, Dover, the wife of Francis Arthur Osborn, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

MARRIAGES.

COWARD—BRUSHFIELD.—On Nov. 6th, at St. Peter's Church, Budleigh-Salterton, Devon, Ernest G. Coward, M.B. Aberd., to Eleanor Millar, daughter of T. Nadauld Brushfield, M.D. St. And.

HARRIS—BEDELL.—On Nov. 9th, at Stowmarket, Robert James Harris, M.R.C.S. Eng., L.R.C.P. Lond., of Rochdale, second son of the late Henry Harris, M.R.C.S.E., of Denmark-hill, London, to Ethel Marie, eldest daughter of the Rev. Alfred Bedell of Stowmarket.

DEATHS.

PARE.—On Sunday, Nov. 10th, at Hampstead, Arthur Henry Esmond Pare, the only son of John William Pare, M.D., L.D.S., of 64, Brook-street, Grosvenor-square, W., and the late Margaret Edmondson Pare.

SMEE.—On Nov. 8th, at his house, The Grange, Carshalton, Alfred Hutchison Smee, M.R.C.S., J.P. for Surrey.

TAYLOR.—On Nov. 11th, at his residence, 6, Grove-park, Liverpool, in his 80th year, John Stopford Taylor, M.D., formerly Medical Officer of Health for that city.

WRIGHT.—On Sept. 14th, at his residence, 15, York-street, Wynyard-square, Sydney, Horatio George Anthony Wright, Surgeon, M.R.C.S. Eng., L.S.A. Lond., of angina pectoris, aged 74 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

ACTION FOR DAMAGES AGAINST A MEDICAL MAN.

AT Southwark County Court on Nov. 4th his Honour Judge Addison, K.C., and a jury spent nearly the whole day in hearing an action to recover £50 damages from Mr. Francis Dugon, M.R.C.S. Eng., of Rotherhithe. The plaintiff, who was the wife of a tramcar driver, alleged that there had been negligent and unskilful treatment by the defendant between May 15th and 21st on the occasion of her confinement, in that he unduly hurried the confinement, pulled the child away before it was proper to do so, and treated her in a negligent and unskilful manner, whereby she had to undergo an operation which confined her to her bed for a considerable time.—The plaintiff in her evidence said that she was 28 years of age, had been married eight years, and had had one child and two miscarriages. She was expecting her confinement in July, but on May 15th she was taken ill about 9 A.M. She sent for the defendant twice and he came between 2 and 3 P.M. He examined her and then went away, as he said the child would not be born for some hours, but she sent for him again in the evening. She was in labour when he arrived and he took the child from her with his hands by force; he then immediately commenced to take the after-birth away with his hand. She afterwards suffered severely from what the defendant said were after-pains, but the nurses did not think that all the after-birth had come away. He continued to visit her every day except one until May 21st, during which time she became worse and pieces of after-birth were expelled. On May 21st Dr. Cooke was called in. He operated upon her and she subsequently found herself in hospital, where she remained until June 8th. She was under the care of Dr. Cooke for two months longer.—Dr. Frederick Arthur Cooke, of Canterbury-road, Old Kent-road, who was called by the plaintiff, said that there was nothing wrong in immediately removing the after-birth and there was nothing in the fact that the birth took only 15 minutes. Witness was called in on May 22nd and found the plaintiff very ill. The same night he and Dr. Handson operated upon her, exploring the interior of the womb and removing three small pieces of firmly adherent after-birth which had produced sepsis. It was possible for a medical practitioner to leave behind some portion of the after-birth without being negligent.—Dr. Charles Percy Handson of Jerningham-road, Newcross, said that when he operated with Dr. Cooke he found that putrefaction had been going on for about three days.—The defendant being called stated that he was surgeon to the London and Greenwich Tramways Company, and had a particularly large experience in midwifery, having conducted over 1200 consecutive cases without a maternal death. The plaintiff's pregnancy had lasted just over six months. The child was born easily and he removed the greater part of the placenta with his hand. He ordered the nurse to syringe her every day with a solution of permanganate of potash. On May 21st her temperature rose to 99·8 F., but there was no delirium and her pulse was not very quick. He then substituted a stronger antiseptic for use with the syringe—namely, a solution of perchloride of mercury.—His Honour, in summing up the case to the jury, remarked that if they found there were four or five ways of doing a thing, and a medical man adopted one way which turned out unsuccessfully, they could not find him at fault if afterwards somebody else said he would have done better had he adopted one of the other ways. The jury after consultation found for the defendant, and his Honour gave judgment accordingly with costs.

FOREIGN WORKS ON PHYSIOLOGY.

To the Editors of THE LANCET.

SIRS,—I wish to procure some recent works in physiology by French and German writers, especially on the subject of chemical physiology. Would any of your numerous readers versed in this science recommend me a few important books? I possess Bunge (1901), Hammarsten, Neumeister, and Hoppe-Seyler. I have no works from a French source. Has such a comprehensive "magnum opus" as "Hermann's Handbuch" appeared on the continent of recent years? I have a recollection of seeing a criticism of such a production, in French, reviewed in the medical papers a couple of years back.

I am, Sirs, yours faithfully,

Nov. 9th, 1901. DIDUNCULUS.

DEATH OF A CENTENARIAN.

To the Editors of THE LANCET.

SIRS,—An interesting paragraph appears in THE LANCET of Nov. 9th, p. 1273, under this heading, and I venture to call your attention to some other verified instances of centenarians. The valuable work of the late Mr. Thoms upon this subject requires no laudatory comment; but admirable as was undoubtedly his equipment for this special investigation, and sagacious as were his methods of inquiry, he was restricted from the nature of the case to alleged instances among the general population where the difficulties of proof are extremely intricate. I have been able (in a Book on Centenarians, published in 1899) to continue similar researches under more propitious conditions, for I was permitted to examine the mortality experience of the life assurance companies of the kingdom and of the National Debt Office. The data thus obtained are not simply specific and authentic but are rendered valid in relation to our subject by the inherent and necessary practice of the companies and Commissioners for the Reduction of the National Debt in requiring adequate evidence of age and conclusive proof also of identity. I thus discovered 22 fresh and undoubted instances of centenarians (see page 10 of my book); and I have also included (page 14) the case of Mrs. M. A. Neve of Guernsey, who was born a year earlier than Mrs. Hanbury and upon recent inquiry was still alive. Her relatives—officers in the army—kindly aided me in procuring the documentary evidence I required, and hence hers is the oldest genuine example on record. Since the book was published many additional cases have been submitted to me for investigation, but with the exception, I think, of two examples only, they have always failed to satisfy the scientific criteria of proof which I have applied. I may, perhaps, be permitted to direct your attention, as the leading medical journal, to the physiological and philosophical elements of the subject of centenarianism which I have discussed in Chapter V. I have asked the publishers to send you a copy of my book, which I beg you in courtesy to accept.—I am, Sirs, yours faithfully,

T. E. YOUNG, B.A., F.R.A.S.,
Late President of the Institute of Actuaries.

Cornhill, London, E.C., Nov. 9th, 1901.

THE CASE OF THE LATE MR. W. K. BROCK.

To the Editors of THE LANCET.

SIRS,—Kindly permit us through the columns of THE LANCET to ask for contributions to a fund we are raising on behalf of the family of the late Mr. W. K. Brock, M.R.C.S., L.S.A., L.M. (formerly in the A.M.S. but obliged to leave the service on reduction of staff), whose untimely death owing to an accident left in very straitened circumstances a widow and eight children. It is specially on behalf of one of these children that we are anxious to collect as soon as possible a sufficient sum to enable him to obtain a living for himself and eventually help the rest of the family. He has shown a great aptitude for pharmacy, and if the opportunity now offered can be taken advantage of he will be earning before long a respectable competency. We appeal with confidence to your readers for contributions, which will be gratefully acknowledged by Mr. B. Jones, Balcarras, Wells-road, Knowle, Bristol, who has consented to act as honorary secretary to the fund. Cheques should be drawn in favour of the honorary treasurer, Mr. E. H. C. Pauli, and crossed "Lloyd's Bank, Limited, Temple-gate, Bristol Branch, Brock Fund."

We are, Sirs, yours faithfully,

GEORGE DUNLOP,
The Vicarage, Knowle, Bristol.
E. H. C. PAULI, M.R.C.S. Eng., L.R.C.P. Lond.,
Alma Villa, Wells-road, Knowle, Bristol.
CHARLES STEELE, M.D. Durh., F.R.C.S. Eng.,
Clifton Villa, Clifton, Bristol.
JAMES STEWART, B.A. R.U.I., F.R.C.P. Edin.,
Dunmurry, Sneyd-park, Clifton, Bristol.

PEN LANCETS FOR USE IN VACCINATING.

WE have received from Messrs. Roberts and Co. of New Bond-street, London, W., some lancets made in the shape of an ordinary pen nib minus the longitudinal slit from the point inwards and with cutting point and edges. They have been introduced as a substitute for the ordinary lancet in vaccinating, the cost being so low that one can be used for each patient and then thrown away, thus obviating the possibility of any transference of infection from one patient to another. A handle is supplied with an ejecting mechanism. The idea of having a separate instrument for every patient is a good one, but we do not see that these pen lancets have any advantage over the ordinary darning needle which is commonly used.

ADVERTISEMENT *IN EXCELSIS*.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to some editorial comments of yours with regard to a letter of mine that appeared in *M.A.P.* I think that before you publicly abuse a brother practitioner you should ask him if he has any explanation to give. My letter was written, as anyone might see, to Mr. T. P. O'Connor as a personal friend, beginning it with his name, for his information and for him to utilise in *his own way*, and no one was more surprised than I was to see the letter printed *in extenso*. I trust you will give this letter a place in your columns.

I am, Sirs, yours faithfully,

Nov. 11th, 1901. N. E. YORKE-DAVIES.

*** We have great pleasure in giving Mr. Yorke-Davies's letter a place in our columns. We may further remark that the letter upon which we commented, as it appeared in *M.A.P.*, did not begin "My dear Mr. O'Connor," or "My dear O'Connor," or "My dear Tay Pay," but "My dear *M.A.P.*," which is not Mr. O'Connor's name. However, of course compositors and readers do make mistakes, sub-editors occasionally nod, and editors sometimes omit to correct mistakes, so that the fault may lie in the office of *M.A.P.* We should advise Mr. Yorke-Davies to give up writing to editors; they are evidently grossly care-

less and stupid and always misinterpret his motives. We have before us a cutting from *Modern Society* of Nov. 2nd, p. 1647, in which most unfortunately appears another effusion from Mr. Yorke-Davies about the waters of Marienbad. It is too long to quote in full, but we give an extract or two: "Marienbad should never be visited as a cure for obesity after middle age is passed. I constantly advise this." "The pity is that those who have been to Marienbad for the cure are not properly instructed as to the foods that *fatten* and those that *strengthen*, because if they were when they returned to England their health and condition might be improved without regaining the fat that they have worked so hard to get rid of. I have pointed out for many years that there is only one safe way of reducing obesity, and that is ....." But we will not be so unkind as to give away Mr. Yorke-Davies's method. Now, did he mean this letter for publication or not? If not, how heroic of the editor of *Modern Society* to proclaim to the world that he is suffering from obesity after middle age is passed; but, on the other hand, how thoughtful of Mr. Yorke-Davies to write to a friend and remind him so delicately that he is not getting younger.—ED. L.

THE METHODS OF A PUBLIC VACCINATOR.

To the Editors of THE LANCET.

SIRS,—I have read with amusement and disgust (but more of the latter) the extraordinary circular on which you commented in THE LANCET of August 17th and Sept. 14th, and of which you have now published the author's name in your issue of Nov. 9th. As the gentleman courts publicity it may be well to assure him that one professional brother vaccinator disapproves entirely of his circular. It has, however, not been made quite clear to whom exactly the circular has been sent. If to parents whose names appear on "Form H" supplied by the vaccination officer then the author trespasses on no man's preserves and his offence is one against good taste only. If, however, it be issued to any other parents, then it is advertising and touting, and the case should undoubtedly be submitted to the General Medical Council.

"Disgusted," whose letter appeared in THE LANCET of Sept. 21st, p. 826, is also weak in his evidence on this same point. How did his patient's name come to the knowledge of the public vaccinator of whom he complains? If the case was covered by a postponement certificate the public vaccinator had no right to interfere. If the term of postponement had elapsed without renewal, then the vaccination officer is bound to deal with it, and "Disgusted" has only himself to blame.

I am, Sirs, yours faithfully,

Nov. 11th, 1901. A COUNTRY P.V.

THE "EVER READY" HEAD LAMP.

MESSRS. A. W. GAMAGE, Limited, of 125, Holborn, London, E.C., have recently designed a neat portable battery and lamp for the use of the physician, surgeon, and dental surgeon. Five small "dry" cells are contained in a leather case provided outside with a switch. It is stated that the charge keeps good for 100 hours when not in use, by which we suppose is meant that the loss of potential due to leakage is very small. The lamp is attached to a curved metallic plate lined with soft cloth which is kept in position on the forehead of the examiner by a strap and buckle fastened at the back of the head. The lamp is provided with a universal joint so that the rays may be directed over a convenient range. The whole apparatus is portable and neatly designed, and is, of course, very convenient for examination of the throat, leaving the hands free. The price is 47*s.* 6*d.*

THE COMPOSITION OF VARIOUS FOODS.

MESSRS. VAN ABBOT AND SONS, of Baden-place, Crosby-row, London, S.E., have published in their new edition of "Cookery Receipts for Diabetics" a very useful series of tables giving the composition of various cereals, fruits, &c. These tables are, of course, intended to serve as a guide to the choice of a suitable diet for the diabetic subject. They will save much of the annoyance and waste of time involved in searching through the large authoritative works on the subject. Besides, the literature on the composition of every kind of food is somewhat scattered.

WANTED—A HOME.

A CORRESPONDENT is anxious to find a home under medical supervision for an elderly lady, inclusive terms not to exceed £25 per annum.

P. G. V.—We do not understand what our correspondent means by "legal." The procedure to which the law of the land takes exception is when a man practises medicine without being registered and pretends to the public that he possesses a medical degree or a medical position, but has not. To use the degree in question would be legal in that sense of the word "legal." But if our correspondent means by "legal" conduct such conduct as would satisfy the Penal Cases Committee of the General Medical Council the case is different. We do not think that the General Medical Council would approve, in ordinary circumstances, of a medical man using an American degree conferred upon him without examination.

Mr. Robert Boyle.—We regret that we cannot afford space to deal with the controversial and somewhat technical matters to which our correspondent refers.

Jara.—Our correspondent is advised to apply to the Consul-General for the Netherlands, Mr. H. J. Maas, 4, Coleman-street, London, E.C.

D. K.—Germany certainly offers more educational advantages.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (3 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.)

SATURDAY (23rd).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (19th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Prof. J. McFadyean: The Immunisation of Cattle against Bacillus Tuberculosis.—Dr. F. W. Andrewes: A Case of Infection by Bacillus Coli Communis with Endocarditis.—Dr. Klein: The Relation of Danysz's Bacillus to Gärtner's Bacillus.—Dr. D. Nabarro: A Case of Gangrene of the Nose associated with Bacillus Pyocyaneus.—Dr. J. W. H. Eyre: A New Centrifuge for Bacteriological Work.

CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine, Chelsea-gardens, Grosvenor-road, S.W.).—8.15 P.M. Cases:—Dr. C. C. Gibbes: Heart Disease. 8.30 P.M. Communications:—Dr. A Macfadyen: A Short Bacteriological Demonstration.—Dr. A. P Penny: Errors in Diagnosis, Avoidable and Unavoidable.

WEDNESDAY (20th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Mr. C. Beck: Exhibition of Some Anti-points seen under the Microscope. 8 P.M. Paper:—Prof. G. P. Girdwood: On Steomicrography.

THURSDAY (21st).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Mr. B. Browne: Twenty-five Years' Experience of Urinary Surgery in England. (Harveian Lecture.)

CHILDHOOD SOCIETY (Library of the Sanitary Institute, Margaret-street, W.).—8 P.M. Lecture.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND (11, Chandos-street, Cavendish-square, W.).—12 noon. Educational Committee. 2 P.M. Council. 3 P.M. General Meeting under the Presidency of Dr. O. Woods.

FRIDAY (22nd).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. T. H. Morse: Case of Intracranial Section of the Second and Third Divisions of the Trigeminal Nerve for Severe Neuralgia.—Mr. W. Haward: A Case of Fragilitas Ossium.—Dr. S. H. Habershon: The Association of Moveable Kidney on the Right Side with Symptoms of Hepatic Disturbance.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. J. Pringle: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Ocular Symptoms.

TUESDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. Taylor: Clinique. (Medical.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Buzzard: Disseminated Sclerosis.

WEDNESDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. H. Marsh: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Minor Surgery.

LONDON THROAT HOSPITAL (204, Great Portland-street, W.).—5 P.M. Mr. Waggett: Malignant Disease of Larynx. (Post-Graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Horton-Smith: Mitral Disease.

THURSDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Treatment of Cardiac Failure.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. F. E. Batten: Affections of the Nervous System following the Acute Specific Fevers.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Willcocks: Medical Cases. (Post-Graduate Course.)

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration.

FRIDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Medical Anatomy.

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. P. Parkinson: Clinical and Pathological Demonstration.

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 14th, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 8	30·17	W.	...	61	53	38	46	48	Overcast
„ 9	30·15	W.	...	65	56	45	45	47	Cloudy
„ 10	30·03	W.	...	65	53	47	47	50	Cloudy
„ 11	29·83	S.W.	...	62	56	50	46	50	Cloudy
„ 12	29·38	S.	...	56	54	50	48	52	Overcast
„ 13	29·05	S.W.	0·01	55	49	46	44	48	Cloudy
„ 14	29·30	NNW	0·36	60	44	37	36	39	Cloudy

During the week marked copies of the following newspapers have been received:—*Municipal Reformer, Allgemeine Medicinische Central-Zeitung, Riveista Medica de San Paulo, Echo, Daily Mail, Daily Express, Yorkshire Post, Standard, Bristol Mercury, Liverpool Daily Post, Windsor and Eton Express, Reading Mercury, La Caducée, Hong-Kong Weekly Press, Herts Advertiser, Times of India, Pharmaceutical Journal, Aberdeen Free Press, Manchester Guardian, Dublin Evening Telegraph, Southampton Echo, Stafford Advertiser, Islington Gazette, Glasgow Evening Times, Leeds Mercury, Birmingham Gazette, Coventry Herald, Whitehall Review, Belfast News, Birmingham Daily Mail, &c.*

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